

**JPRS 73894**

**24 July 1979**

# **China Report**

**SCIENCE AND TECHNOLOGY**

**No. 2**



**FOREIGN BROADCAST INFORMATION SERVICE**

## NOTE

JPRS publications contain information primarily from foreign newspapers, periodicals and books, but also from news agency transmissions and broadcasts. Materials from foreign-language sources are translated; those from English-language sources are transcribed or reprinted, with the original phrasing and other characteristics retained.

Headlines, editorial reports, and material enclosed in brackets [] are supplied by JPRS. Processing indicators such as [Text] or [Excerpt] in the first line of each item, or following the last line of a brief, indicate how the original information was processed. Where no processing indicator is given, the information was summarized or extracted.

Unfamiliar names rendered phonetically or transliterated are enclosed in parentheses. Words or names preceded by a question mark and enclosed in parentheses were not clear in the original but have been supplied as appropriate in context. Other unattributed parenthetical notes within the body of an item originate with the source. Times within items are as given by source.

The contents of this publication in no way represent the policies, views or attitudes of the U.S. Government.

## PROCUREMENT OF PUBLICATIONS

JPRS publications may be ordered from the National Technical Information Service, Springfield, Virginia 22161. In ordering, it is recommended that the JPRS number, title, date and author, if applicable, of publication be cited.

Current JPRS publications are announced in Government Reports Announcements issued semi-monthly by the National Technical Information Service, and are listed in the Monthly Catalog of U.S. Government Publications issued by the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.

Indexes to this report (by keyword, author, personal names, title and series) are available from Bell & Howell, Old Mansfield Road, Wooster, Ohio 44691.

Correspondence pertaining to matters other than procurement may be addressed to Joint Publications Research Service, 1000 North Glebe Road, Arlington, Virginia 22201.

<b>REPORT DOCUMENTATION PAGE</b>		<b>1. REPORT NO.</b> JPRS 73894	<b>2.</b>	<b>3. Recipient's Accession No.</b>
<b>4. Title and Subtitle</b> CHINA REPORT: SCIENCE AND TECHNOLOGY, No. 2			<b>5. Report Date</b> 24 July 1979	
<b>7. Author(s)</b> 71			<b>6.</b>	
<b>9. Performing Organization Name and Address</b> Joint Publications Research Service 1000 North Glebe Road Arlington, Virginia 22201			<b>8. Performing Organization Rept. No.</b>	
			<b>10. Project/Task/Work Unit No.</b>	
			<b>11. Contract(C) or Grant(G) No.</b> (C) (G)	
<b>12. Sponsoring Organization Name and Address</b>  As above			<b>13. Type of Report &amp; Period Covered</b>	
			<b>14.</b>	
<b>15. Supplementary Notes</b>				
<b>16. Abstract (Limit: 200 words)</b>  This serial report contains articles, abstracts and news items on national developments in science and technology; and physical, applied and life sciences in China.				
<b>17. Document Analysis a. Descriptors</b>  CHINA National Developments Academia Sinica Physical Sciences Applied Sciences Life Sciences  <b>b. Identifiers/Open-Ended Terms</b>  <b>c. COSATI Field/Group</b> 01, 02, 04, 06, 07, 08, 09, 11, 12, 13, 20				
<b>18. Availability Statement</b> Unlimited Availability Sold by NTIS Springfield, Virginia 22161		<b>19. Security Class (This Report)</b> UNCLASSIFIED		<b>21. No. of Pages</b> 85
		<b>20. Security Class (This Page)</b> UNCLASSIFIED		<b>22. Price</b>

24 July 1979

# CHINA REPORT

## SCIENCE AND TECHNOLOGY

No. 2

CONTENTS	PAGE
NATIONAL DEVELOPMENTS	
Changes in Weaponry on Ships in Post-1960s Reviewed (Bo Liang; JIANCHUAN ZHISHI, Feb 79).....	1
PHYSICAL SCIENCES	
Briefs Changchun Institute of Physics	9
APPLIED SCIENCES	
Chinese Scientist Interviewed on Use of Marsh Gas (Qian Xuesen Interview; Xinhua Domestic Service, 10 Jun 79).....	10
Briefs Fujian Hosts Cybernetics Seminar	11
LIFE SCIENCES	
Briefs Fujian Public Health Guangdong Planned Parenthood Hunan Drugs Conference Forum on Medical Science Sichuan Planned Parenthood Henan Prefecture Planned Parenthood	12 12 12 13 13 13



**CONTENTS (Continued)****Page****ABSTRACTS****AERONAUTICS**

- HANGKONG ZHISHI [AERONAUTICAL KNOWLEDGE], No 4, Apr 79)... 14

**BOTANY**

- ZHIWU SHENGLI XUEBAO [ACTA PHYTOLOGIA SINICA],  
No 1, Feb 79)..... 24

**ENGINEERING**

- DALIAN GONGXUEYUAN XUEBAO [JOURNAL OF DAIREN ENGINEER-  
ING INSTITUTE], No 1, Mar 79)..... 31

**GEOPHYSICS**

- DIQIU WULI XUEBAO [ACTA GEOPHYSICA SINICA], No 2,  
Apr 79)..... 40

**MEDICINE**

- ZHONGHUA SHENJING-JINGSHENKE ZAZHI [CHINESE JOURNAL  
OF NEUROLOGY AND PSYCHIATRY, No 1-2, 5 Mar 79,  
5 Dec 78)..... 45
- ZHONGHUA YUFANG YIXUE ZAZHI (Chinese Journal of  
Preventive Medicine], No 1, 25 Feb 79)..... 70

## NATIONAL DEVELOPMENTS

### CHANGES IN WEAPONRY ON SHIPS IN POST-1960S REVIEWED

Beijing JIANCHUAN ZHISHI [KNOWLEDGE OF SHIPS] in Chinese No 1, Feb 79 pp 5-8

[Article by Bo Liang [0130 5328]: "Characteristics of Modern Destroyers"]

[Text] Destroyers are the most common ships in the naval forces of all countries. Since they are used in so many ways, they are called "jacks-of-all-trades." It was almost 100 years ago that they first appeared and, with the ever increasing level of industrial technology and the rapid development of science and technology, destroyers constantly changed silhouette, particularly during the past 20 years of great changes. This article focuses on introducing the reader to the common characteristics of post-60's new construction of modern destroyers abroad.

#### 1. Shift in Armament From Guns and Torpedoes to Guided Missile Weaponry for the Most Part

Guided missiles have continuously demonstrated their superiority since they were first deployed on ships. They surpass guns in many ways. Take effective range of fire, for example. At present, the effective range of ships' guns of medium caliber is 25 kilometers at most. A new type of artillery shell currently under development, called a rocket-boosted shell, has an effective range of 40 kilometers. The longest effective range of torpedoes is between 10 and 20 kilometers. At the same time, ship-to-ship guided missiles already deployed on surface ships have a short range of 30 to 40 kilometers and a long range approaching 600 kilometers. Thus, a ship equipped with only guns and torpedoes would be at the mercy of one equipped with guided missiles. In 1967, the sinking of the 2,500-ton Israeli destroyer Eilat by a small Egyptian guided missile ship was an outstanding example of this. Nor can ships' guns compare with the range of guided missiles in handling high-altitude moving targets. In other things too, such as percentage of hits and similar tactical capabilities, ships' guns and torpedoes cannot compete. For these reasons, modern destroyer armaments have already shifted from guns and torpedoes to guided missile weaponry for the most part.

There are three kinds of guided missiles presently in use on ships: ship-to-ship, ship-to-air, and ship-to-submarine. Ship-to-air guided missiles

may be further subdivided into two types. One type is for use against medium-altitude targets. It is a medium-range surface-to-air missile used for air defense of an area or a fleet formation. The other type is used principally against very low-flying cruise missiles. It is a surface-to-air short-range multiple guided missile for spot air defense and for air defense of a ship itself. Depending on the size and mission of a vessel, different types of missiles will be deployed on it.

Inasmuch, however, as there are some functions that guns can fulfill but missiles cannot, guns have not yet moved off the stage of history. They still find use in navies. Missiles have certain shortcomings, including a low rate of fire, a long firing interval, limitations on numbers a ship can carry, and high cost. Guns, on the other hand, have a rapid rate of fire, a rather large number of charges for them can be stored, they function reliably, and they are rather economical and convenient to use. This is particularly true of small-caliber, multiple-barrel, automatic firing guns, which because of their rapid rate of fire, can put up a barrage almost instantaneously to intercept incoming targets attacking at fairly close range. They are particularly effective against extremely low-flying cruise missiles which are difficult to detect on radar. For these reasons, modern destroyers are equipped with both multiple, short range surface-to-air guided missiles, and small-caliber multiple-barrel, automatic, rapid-fire guns to make a rather effective antimissile system. Furthermore, in local wars or on daily reconnaissance, escort, or patrol duty, guns are essential. In amphibious landing operations, in particular, the fire support that medium-caliber guns on ships can lay down on an opposite shore is indispensable.

Naval guns under development are, for the most part, enclosed, radar-controlled, automatic, rapid-fire guns of medium and small caliber. The degree of their automation, their firing rate, their ignition rate, and the performance of shells is being constantly improved. Some are even equipped with optical and television systems. The advanced 76-130 millimeter naval guns can fire 90 shells per minute. The best of the 20-57 millimeter naval guns, most of which are equipped with between 2 and 6 barrels, can fire 3,000 rounds per minute. Large-caliber naval guns have largely become historical relics.

Torpedoes still find use on modern destroyers, but the torpedoes formerly used to attack surface ships have been gradually phased out. In modern submarine warfare, self-guided antisubmarine torpedoes occupy a rather important position. Rocket technology and the former conventional antisubmarine weapons have been combined to form an antisubmarine rocket or antisubmarine missile. This consists of a rocket propulsion system mounted on the tail of an antisubmarine self-propelled torpedo (or depth charge) to form an unguided supersonic ballistic missile. This missile flies through the air for a distance after firing. After a fixed period of flight and just before reentry, the rocket propulsion system falls away, and the torpedo (or depth charge) travels through the water to hit the



submarine. The timing of the rocket propulsion system drop is determined by a control system aboard the ship. This system controls a timing device in the missile in advance of firing. During the brief period of flight after the rocket propulsion device separates and until the torpedo or depth charge descends to the water, the depth charge relies on tail fins for stability and the self-propelled torpedoes deploy parachutes to slow to a safe speed so that the sensitive self-propulsion system and the electronic components in their heads will not sustain damage when they hit the water. Just before the torpedoes enter the water, the parachute falls away. Once the torpedo has entered the water, the self-propulsion system begins to work, automatically tracking submarines and quickly approaching its target to make a hit. This kind of antisubmarine guided missile presently has a maximum firing range of 20 kilometers.

## 2. Development of Multipurpose Guided Missiles and Multipurpose Firing Mechanisms To Improve Ships' Combined Defense Capabilities

As naval warfare becomes ever more three dimensional, with threats of attack coming from the air, from the surface of the water, or from underwater, it has become necessary to improve the ships' combined defense capabilities. To guard against air, sea, and submarine attacks, modern destroyers must be fitted with weapons of many kinds as well as with guidance and control systems. The increase in antennas for the various electronic detection equipment sharpens competition for deck and hold space on the ships. Thus, design must take account of the relative importance of the mission of various pieces of equipment, providing for some and ruling out others. In order to use limited deck space to the fullest, the navies of some countries have developed multipurpose guided missiles that can be used both for attack against ships and for air defense, as well as multipurpose launch systems for use with guided missiles launched into the air, against other surface ships, or against submarines. A multipurpose radar, for example, has been installed on ships. It can simultaneously scan, spot, and track several targets and it can simultaneously issue midflight guidance commands to several guided missiles. One radar can replace several with a concomitant reduction in the number of radar antennas aboard the ship.

Of course this method of operation also has some shortcomings. If a launch system or a radar antenna suddenly sustains damage, several defense capabilities will be damaged at the same time. Consequently, thought must be given to overall deployment and layout.

## 3. Universal Deployment of Shipboard Helicopters

Because of the increasing threat from submarines, broadening the anti-submarine spotting area and improving destroyer attack capabilities against submarines became constant concerns of navies during the mid-50's. Sonar with longer-range tracking capabilities and improved antisubmarine weapons were both installed on ships, but antisubmarine helicopters were additionally deployed in ever increasing numbers on destroyers during the early

'60's. This was because the speed and maneuverability of helicopters are very clearly superior to those of submarines. Their cruising speed is more than five times that of any class of submarine and they can hover over any spot on the ocean for a relatively long period of time. A helicopter used in this way can place a suspension-type sonar buoy into the water to monitor a large ocean area within a short period of time, thus enlarging the scanning area. A small number of helicopters can effectively "sweep" the area surrounding a formation of ships and its course. The defect in this system is that, when tracking a submarine, the sonar must be retrieved and replaced in the submarine's anticipated course. But if a fast submarine undertakes evasive action, its track may be lost. For this reason, a helicopter-towed sonar is now under development.

Helicopters currently in use aboard destroyers have become multipurpose. Their most important mission is defense against attacks from enemy cruise missiles and to carry out direct attacks against submarines in the course of spotting them. Because the altitude at which a helicopter can fly vastly exceeds the height above water of a destroyer's antenna, the range at which a helicopter-borne radar can spot a surface target is much greater than the sighting range of radar on a destroyer. Thus, enemy ships or extremely low-flying ship-to-ship missiles can be discovered early. Helicopters also carry torpedoes and depth charges for antisubmarine use. Once an enemy submarine has been spotted, and after it has been identified and its position determined, it can be attacked at once. Helicopters also carry air-to-ship missiles for attack against enemy ships.

Additionally, helicopters can perform missions such as sea rescue, personnel transport, and supply drops. For these reasons, deployment of helicopters on destroyers was virtually universal by the mid-60's and helicopters became an important component of the destroyer's weapons system.

#### 4. Engine Development in Direction of Gas Turbines

The type of engine has a direct bearing on a ship's cruising range, its maneuverability, and its infrared radiation. For these reasons, whether the engine is of advanced design and whether it improves the ship's tactical capabilities is a crucial issue. In the early 1960's, destroyers began to use gas turbines as engines. Experience has shown them to possess the following characteristics:

(1) Small size and light weight. The total weight of these turbine engines is only 30 to 40 percent of that of steam turbine engines. Given equivalent displacement, ammunition storage capacity can be effectively increased, thereby increasing the ship's rate of fire.

(2) Rapid ignition and great speed. Full efficiency can be achieved with a turbine engine within 2 or 3 minutes after cold ignition, on an average. Engines fired by steam boilers, by contrast, require about 30 minutes' wait from the time boilers are fired. For this reason, turbine engines



greatly improve the ship's readiness for emergency action as well as its maneuverability. This is extremely important in defense against sudden attack and in emergency situations.

(3) Simplicity in construction, easy automation, convenience in operation, maintenance, and repair. The main components of a gas turbine can be individually replaced, thereby greatly shortening repair time and improving the ship's combat efficiency. The engine room crew can also be cut by about one-third. Though gas turbine engines still have some deficiencies that must await improvement, they possess other thoroughly outstanding characteristics. For this reason, most countries have since the '60's changed their policy in favor of gas turbines for use as engines in their naval vessels. Except for destroyers already under construction, no others were built that used any kind of engines other than gas turbines. The tendency in the development of engines for destroyers and other medium and small surface warships is toward gas turbines.

#### 5. Improving and Perfecting Electronic Scanning Equipment and Shipboard Guidance and Control Systems

If a ship's armament is likened to the human "fist," then the electronic sensing equipment can be likened to the "ears and eyes" and the guidance and control system aboard the ship to a "cerebrum."

Radar installations on ships presently include air warning, sea warning, gun sighting and aiming, range computing, missile tracking, IFF, navigation, scanning, and jamming systems. Underwater sonar includes four or five kinds. They must meet modern conditions for use, be able to operate at long ranges, be light in weight, compact in size, possess excellent target discrimination capabilities and tracking characteristics, be able to function under conditions of electronic disturbance, have steady and dependable rotation, and be simple and convenient to control, repair, and maintain.

In modern combat, many changes can take place in the twinkling of an eye. The very survival of ships may depend on the speed of reaction to attack by an incoming target. It is essential to grasp the situation in the battle area at once, including the large quantity of intelligence and data derived from various sensing and communications equipment; it is essential to use these data at once to identify, compute, deal with, make judgments and take proper action if victory over the enemy is to be won. Under conditions of modern naval warfare, only a few minutes are allowed between spotting a target and taking action. Given such a short span of time, reliance on automatic guidance and control systems is necessary. Without them, command personnel would be unable to give timely and effective battle commands and battle coordination among warships would not be possible. The appearance of the computer and the many new advances in technology leading to the miniaturization of equipment have made automated guidance and control systems a reality. Currently, automatic tactical

data processing systems on destroyers provide input, storage, identification, revision, computation, and transmission of large amounts of continuously changing data to screens. In this way, commanders can see on the screens a map of the true battle situation.

Currently the tendency is to place most of the combat guidance and weapons control equipment in a single room, the Combat Intelligence Center. Control towers for principal combat commanders, such as missile and gunnery commanders, and antisubmarine commanders are placed on both sides of the bridge. This procedure vastly simplifies coordination and control. If, for example, a long-range naval reconnaissance aircraft discovers an enemy submarine at a distance--and should that submarine be carrying guided missiles--the submarine poses both an underwater and an air threat to the formation. If the above centralized direction and decentralized control are used, timely receipt of warning will be guaranteed and components concerned will be able to make combat preparations at the same time. Some battle experiences demonstrate that, though defense and reserve capabilities are important in the modern navy, the ability to mount preemptive strikes is even more important. When the annihilatory weapons of today are used, once main equipment has been damaged, there is little advantage to be gained from increased reserve capabilities. If command is concentrated in a single station, reaction time is shortened, commands become more effective, and an increase in first-strike initiative is gained. Consequently, this concept is gaining more and more acceptance from ship captains. Of course, should the Combat and Intelligence Center sustain a direct hit, the command of the ship would be brought to the brink of paralysis or destruction and the life of the ship would be endangered.

#### 6. Defense Capabilities Against Contamination From Atomic, Biological, or Chemical Weapons

In order to defend against contamination from atomic, biological, and chemical weapons, most modern destroyers possess working and living areas that can be pressurized. In their "open" mode, cabins are not pressurized and the outside air circulates freely throughout the ship. Under conditions of atomic, biological, or chemical warfare, or when passing through a contaminated zone, the cabins are placed in a "closed" mode with both work and living areas maintaining a definite amount of pressure to prevent the intrusion of contaminants damaging to humans. Ships are usually divided into separate airtight compartments so that, if one airtight area sustains damage, the airtightness of other areas will not be affected.

The above characteristics symbolize just what new levels modern destroyers have reached and from this one can see in what direction destroyers are developing.



Figure 1. Modern destroyer

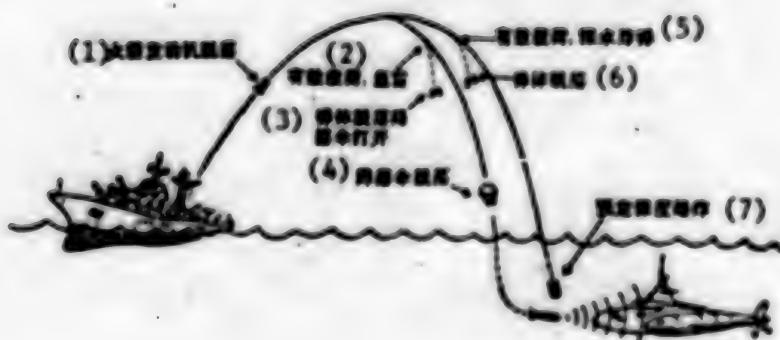


Figure 2. Antisubmarine missile flight sequence

Key:

1. Rocket propulsion system falls away
2. Payload: torpedo
3. Projectile body falls away and parachute opens
4. Parachute falls away
5. Payload: depth charge
6. Projectile body falls away
7. Explosion at predetermined depth



Figure 3. Sketch map showing multipurpose helicopter in combat

Key:

- |                           |                                              |
|---------------------------|----------------------------------------------|
| 1. Enemy ship             | 5. Airdropped passive and active sonar buoys |
| 2. Torpedo                | 6. Own ship                                  |
| 3. Communications contact | 7. Enemy submarine                           |
| 4. Enemy cruise missile   |                                              |

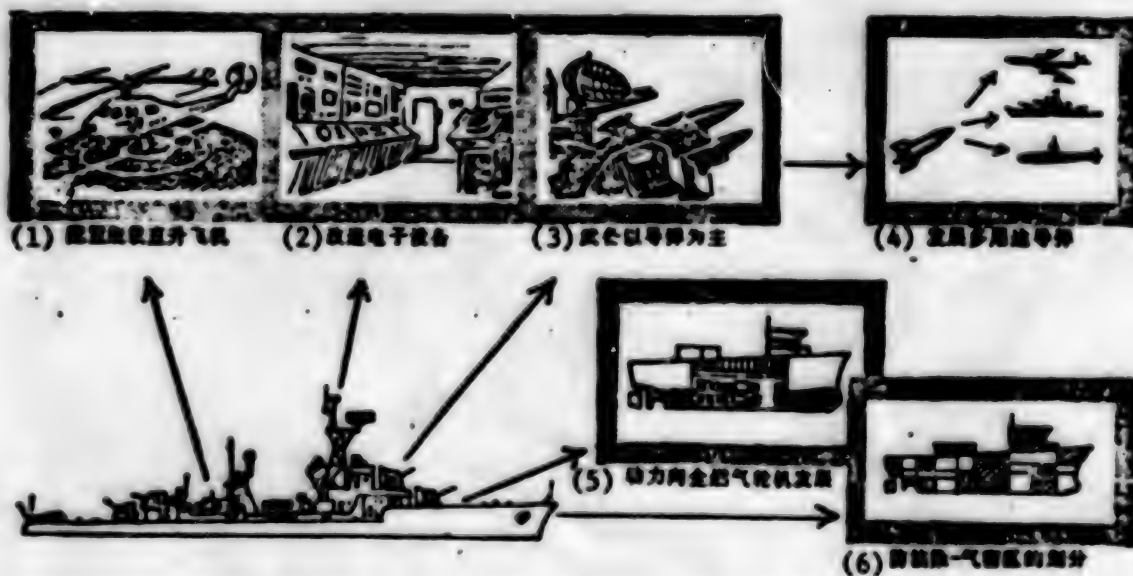


Figure 4. Some characteristics of modern destroyers

Key:

1. Helicopter aboard deployed ship
2. Advanced electronic equipment
3. Armament, principally missiles
4. Development of multipurpose missiles
5. Development in direction of gas turbine engines
6. Compartmentation against contaminants

## PHYSICAL SCIENCES

### BRIEFS

**CHANGCHUN INSTITUTE OF PHYSICS**--Changchun, 22 May--The Changchun Institute of Physics of the Chinese Academy of Sciences has made headway in the research of auto-electronic illumination for digital numbers and analogous simulation. This technique has now been adopted by the metallurgical machinery and electrical power industries and will be used in scientific research, sports and national defense. Aided by the institute, the Baicheng Municipal Electrical Illumination Apparatus Plant in Jilin Province has developed and produced a kind of table tennis score board with auto-electronic illumination device. Digital clocks used by radio broadcasting stations in more than 20 provinces, municipalities and autonomous regions are illuminated by auto-electronic illumination devices. [Beijing Xinhua Domestic Service in Chinese 0223 GMT 22 May 79 OW]

CSO: 4008



## APPLIED SCIENCES

### CHINESE SCIENTIST INTERVIEWED ON USE OF MARSH GAS

Beijing Xinhua Domestic Service in Chinese 0241 GMT 10 Jun 79 OW

[Xinhua reporters' interview with scientist Qian Xuesen: "A Bright Prospect for Developing the Use of Marsh Gas"]

[Excerpts] Beijing, 10 June--Comrade Qian Xuesen is a noted scientist of our country.

He has paid close attention to using marsh gas in our countryside. Since 1957 he has written articles on several occasions, made proposals to leading comrades and spoken at relevant conferences, repeatedly stressing that it is essential to run marsh gas well. At the same time, he has been constantly concerned about its development. In recent years our countryside has developed the work of making, using and popularizing the use of marsh gas fairly well. By the end of 1978 our country had established more than 7 million marsh gas tanks, marsh gas has been extensively used by more than 17,000 production brigades, 560 marsh gas power stations and 150 small-scale marsh gas power generating stations have been built. Further progress has been made in its multipurposed utilization. Rural areas in various localities have adopted less expensive and relatively simple measures for producing marsh gas to increase our supply of energy and purify the environment. Comrade Qian Xuesen was very happy over these achievements.

He said: At present, in view of the energy crisis, many countries in the capitalist world are searching for new energy resources in addition to coal, petroleum and others, such as the use of sunlight, tides, underground heat, wind and plants and animals. China is rich in energy resources, but it is also necessary to pay attention to the use of new energies. The running of marsh gas in the countryside is an important way of scientifically and effectively using the energy resources of plants and animals. He said: The supply of plant leaves, stems and grass is enormous, and so is their energy. About a half or two thirds of the sunlight energy within plants are in their leaves and stems. In other words, of the plants capable of producing 1,000 catties of grains, the energy equal to about a half a ton of coal is contained in the leaves and stems. In 1978, China turned out 590 billion catties of grain, and the energy contained in the leaves and stems of these plants is equal to more than 200 million tons of coal. This is a huge figure.

## **APPLIED SCIENCES**

### **BRIEFS**

**FUJIAN HOSTS CYBERNETICS SEMINAR**--A national seminar on the use and application of cybernetics was recently held in Xiamen. This was the first such meeting to be convened by the cybernetics committee of the Chinese Automation Association, and was held with the approval of the All-China Science and Technology Association. Over 120 persons concerned from all parts of the country attended the meeting, and 103 theses and reports were presented. [Fuzhou Fujian Provincial Service in Mandarin 0300 GMT 14 Jun 79 HK]

CSO: 4008

## LIFE SCIENCES

### BRIEFS

**FUJIAN PUBLIC HEALTH**—The Fujian Patriotic Public Health Movement Committee and the Provincial Public Health Bureau will issue Fujian Public Health Supervision Certificates with the approval of the Provincial Revolutionary Committee, to serve the speeding up of the four modernizations. The certificates will be issued to the leaders of the departments concerned in the province, prefectures, municipalities and counties. The certificate holders are authorized to conduct public health supervision in environmental hygiene, foodstuffs, labor, schools and urban construction. They also have the right to criticize and correct those who violate public health practice. The public health supervisors must wholeheartedly serve the people and strictly observe the three main rules of discipline and eight points for attention. [Fuzhou Fujian Provincial Service in Mandarin 0300 GMT 17 Jun 79 HK]

**GUANGDONG PLANNED PARENTHOOD**—In response to the call of the party and government, 13,000 couples in Guangdong have pledged not to have any more than one child. According to incomplete statistics, 6,000 couples in Guangzhou Municipality including the units subordinate to the province had only one child by the end of May 1979. In Foshan Prefecture, there are also 2,000 couples who have made this decision. Other prefectures have also begun to follow this new custom. However, the leaders in some prefectures and counties still do not pay serious attention to this important task. This should arouse the serious attention of the leading departments of the party and government at all levels and they should adopt effective measures to solve the problem. [Guangzhou Guangdong Provincial Service in Mandarin 0000 GMT 14 Jun 79 HK]

**HUMAN DRUGS CONFERENCE**—The first Hunan Provincial Pharmaceuticals Conference was recently held in Changsha. The conference emphatically studied the issues on transforming the medical management system and on unifying the management of the production, supply and application of Chinese and Western medicine and medical instruments. The conference also pointed out that it is necessary to rectify existing enterprises that produce medicine and medical instruments, enhance the quality of their products, strengthen scientific medical research and continuously increase varieties. [Changsha Hunan Provincial Service in Mandarin 1100 GMT 5 Jun 79 HK]

**FORUM ON MEDICAL SCIENCE--Beijing, 8 May--**The China Medical Society recently held a forum on popularizing medical science. In order to strengthen leadership over this work, the society decided to establish a working committee on popularizing medical science. The committee discussed problems concerning public health, environmental sanitation and planned parenthood and formulated work plans for 1979 and 1980. At the forum many pictures and slides were shown, pamphlets exhibited and experiences exchanged. Great achievements have been made in this field by various methods in various localities throughout the country. Over 2 million copies of "Hygiene for the Adolescent," edited by Xie Bozhang, have been sold all over the country and over 1 million copies of "Handbook for Barefoot Doctors," edited by Wu Zonglin, have been published and distributed. [Beijing Xinhua Domestic Service in Chinese 0111 GMT 8 May 79 OW]

**SICHUAN PLANNED PARENTHOOD--Chengdu, 29 May--**Jiangjin Prefecture of Sichuan Province has taken effective measures to control population growth with good results. The population growth rate of the prefecture fell from 39.9 per thousand in 1970 to 9.43 per thousand in 1978. [Beijing Xinhua Domestic Service in Chinese 0156 GMT 29 May 79 OW]

**HENAN PREFECTURE PLANNED PARENTHOOD--**The Nanyang Prefectural Planned Parenthood Office and the Prefectural Public Health Bureau recently ran a training class in Tanghe County on male sterilization. Tanghe County is a backward county in planned parenthood. The rate of natural growth of population of this county in 1977 and 1978 exceeded 20 per 1,000. The training class taught people in the county about male sterilization and eliminated their worries. [Zhengzhou Henan Provincial Service in Mandarin 1100 GMT 4 Jun 79 HK]

CSO: 4008

AERONAUTICS

AUTHOR: XIE Chu [6200 4342]

ORG: None

TITLE: "Birth of the Atomic Bomb"

SOURCE: Beijing HANGKONG ZHISHI [AERONAUTICAL KNOWLEDGE] No 4,  
Apr 79 pp 2-5

ABSTRACT: The atomic bomb was developed as a result of major scientific discoveries in physics and research programs sponsored by the U.S. Government. This article presents a historical account of the events leading to the birth of the atomic bomb: 1) establishment of Einstein's theory of relativity in 1905 which laid the foundation of utilizing atomic energy; 2) discovery of the neutron in 1932; 3) discovery of the phenomenon of nuclear fission in 1938; 4) establishment of the Manhattan Project in 1942 to develop the atomic bomb; 5) construction and successful testing of the first atomic bomb at the test site in New Mexico; and 6) the actual use of atomic bombs on two Japanese cities: Hiroshima and Nagasaki in 1945.

AUTHOR: None

ORG: None

TITLE: "Letters From Eye Witnesses of Flying Saucers"

SOURCE: Beijing HANGKONG ZHISHI [AERONAUTICAL KNOWLEDGE] No 4,  
Apr 79 p 5

ABSTRACT: Three sightings of unidentified flying objects (UFO's) were reported by readers of HANGKONG ZHISHI. They were: 1) Chen yu-fu [7115 0645 4395] of Shanhai Province reports the sighting of a bright annular flying object in the fall of 1970; 2) Li lin-peí [2621 2651 1014] of Inner Mongolia reports the sighting of a silver disc in the summer of 1976; and 3) Chen chu [7115 2816] a member of the People's Liberation Army in Hopei Province, reports the sighting of a bright spherical object in September of 1971.



AUTHOR: ZHANG Zi-yen [1728 1311 1750]

ORG: None

TITLE: "The SAAB 37 Viggen Fighter Airplane"

SOURCE: Beijing HANGKONG ZHISHI [AERONAUTICAL KNOWLEDGE] No 4,  
Apr 79 pp 8-10

ABSTRACT: The SAAB 37 is a supersonic fighter airplane built by the SAAB company of Sweden. It is designed to be a multi-purpose airplane which can be used as a tactical support airplane, an interceptor, or a reconnaissance airplane. Its capabilities include: 1) short take-off and landing; 2) low altitude supersonic flight; 3) high degree of maneuverability; and 4) maximum flight speed of Mach two. In this article, the special features of its aerodynamic design, which includes a triangular wing, a forward canard, and a transonic "bulge", are explained in detail. The important technical data of the airplane are also summarized.

AUTHORS: WU Xie-kang [0702 3610 1660]  
CHIEN Ju-ying [692 5112 5391]

ORG: None

TITLE: "Anti-Aircraft Guns and Modern Air Defense"

SOURCE: Beijing HANGKONG ZHISHI [AERONAUTICAL KNOWLEDGE] No 4,  
Apr 79 pp 11-13

ABSTRACT: This article discusses the role of anti-aircraft guns in a modern air defense system. Basically, anti-aircraft guns are used to defend against low altitude targets while surface-to-air missiles are used to defend against high altitude targets. Examples of the Vietnam war and the Middle East war are cited to demonstrate the effectiveness of anti-aircraft guns against low flying high-speed airplanes which cannot be detected by early warning radars. In conclusion, the classifications of modern anti-aircraft guns according to caliber size, mobility, and operating conditions are introduced.

**AUTHOR:** ZHANG Lu-chien [1728 1462 6197]

**ORG:** None

**TITLE:** "Applications of the Charge Coupling Device"

**SOURCE:** Beijing HANGKONG ZHISHI (AERONAUTICAL KNOWLEDGE) No 4,  
Apr 79 pp 14-16

**ABSTRACT:** This article describes the various applications of charge coupling devices: 1) conventional television cameras, high-sensitivity cameras, and infrared cameras; 2) information processing devices which include moving target indicators in radars and information re-arranging devices; and 3) digital storage units for computers.

**AUTHOR:** Shan Wang [1472-3042 2489]

**ORG:** None

**TITLE:** "Sailing Through Space"

**SOURCE:** Beijing HANGKONG ZHISHI (AERONAUTICAL KNOWLEDGE) No 4,  
Apr 79 pp 16-17

**ABSTRACT:** Solar radiation provides a source of energy that can be used to propel a "sail boat" in space. The velocity of the sail boat depends on the distance from the sun, the mass of the boat, the size of the sail, and the direction of solar radiation with respect to the sail. The National Aeronautics and Space Agency (NASA) of the United States has proposed two designs of solar sail boat: the first is a 820 kg vehicle with a plastic square sail 800 m on each side; the second is a wheel shaped vehicle with 12 large pieces of plastic blades called heliogyro. The two vehicles were designed to accomplish two missions: one is to rendezvous with the Harley comet in 1986; the other is to collect specimen from the planet Mars.

AUTHORS: LIU Mou-ji [0491 6180 0165]  
Qiu Cheng-hao [6726 2052 8513]

ORG: None

TITLE: "What is Atmosphere?"

SOURCE: Beijing HANGKONG ZHISHI [AERONAUTICAL KNOWLEDGE] No 4,  
Apr 79 pp 18-19

ABSTRACT: Atmosphere is a layer of gas concentrated in a region approximately 30 km in thickness above the earth surface. Its upper boundary extends as high as 2000-3000 km. The composition of atmosphere consists of 78 per cent of nitrogen, 21 per cent of oxygen, and 1 per cent of argon, CO<sub>2</sub> and other rare gases. The atmosphere not only sustains all forms of life on earth, it also protects us from extreme temperature fluctuations, invading comets, and ultra-violet radiation. Without atmosphere, an airplane cannot operate because it relies on air to generate aerodynamic lift forces as well as propulsion.

AUTHOR: JIN Lin [6855 7117]

ORG: None

TITLE: "Airplane Layout Based on the Control System"

SOURCE: Beijing HANGKONG ZHISHI [AERONAUTICAL KNOWLEDGE] No 4,  
Apr 79 pp 20-21

ABSTRACT: In a question and answer format, the author discusses the modern trend of designing airplane layout based on flight control system as well as on aerodynamic, structural, and propulsion considerations. He also explains certain unique features of this type of airplane: 1) the so-called direct force control, which allows the airplane to move laterally or vertically without changing its attitude; and 2) computerized moment control, which allows the airplane to pitch and yaw without changing its trajectory.

AUTHOR: LI Guang-wu [2621 0342 2976]

ORG: None

TITLE: "Multi-Colored, Criss-Crossing Cables on an Airplane"

SOURCE: Beijing HANGKONG ZHISHI [AERONAUTICAL KNOWLEDGE] No 4,  
Apr 79 pp 22-23

ABSTRACT: On a modern aircraft, large numbers of electric cables are used to transmit power to various instruments, air-conditioning and ventilation equipment, as well as communication and automatic control equipment. In this article, the special problems encountered in the manufacturing, labeling, testing, installing, and insulating electric cables on an airplane are discussed. The color codes used to identify cables for different systems on an airplane are also introduced. In conclusion, the importance of thorough inspection of cable wirings to avoid costly or disastrous errors is emphasized.

AUTHOR: SUN Jing-qiao [327 2529 2890]

ORG: None

TITLE: "Radio Controlled Parachute-Wing for Aerial Photography"

SOURCE: Beijing HANGKONG ZHISHI [AERONAUTICAL KNOWLEDGE] No 4,  
Apr 79 pp 24-26

ABSTRACT: An experiment has been conducted to study the feasibility of using a radio controlled parachute-wing for taking aerial photographs. During more than 10 test flights, over 100 photographs were taken to demonstrate the capability and reliability of this technique. In this article, the structure of the parachute-wing, the engine, and the camera assembly are described in detail. The procedure of taking aerial photographs is also illustrated.

AUTHOR: SHU Tian [5289 1131]

ORG: None

TITLE: "Nicknames of the United States Manned Spacecraft"

SOURCE: Beijing HANGKONG ZHISHI [AERONAUTICAL KNOWLEDGE] No 4,  
Apr 79 pp 29-30

ABSTRACT: For each mission of the U.S. space programs, the astronaut was asked to choose a nickname for the spacecraft which he commanded. In this article, the author lists all the nicknames selected for each flight mission of the "Mercury" program, the "Gemini" program, and the "Apollo" program. A brief interpretation of each nickname is given.

AUTHOR: CHEN Zong zong [7115 1350 1350]

ORG: None

TITLE: "Classification of Air Cushion Devices"

SOURCE: Beijing HANGKONG ZHISHI [AERONAUTICAL KNOWLEDGE] No 4,  
Apr 79 pp 30-31

ABSTRACT: Air cushion devices are classified according to the structure and mechanism of the lifting system. Generally, there are two major types of air cushion lifting systems: static lifting system and dynamic lifting system. Static lifting system can be used to lift up the vehicle when it is stationary; it has four basic types: the single air chamber type, the air curtain type, the ejector pressurization type, and the air lubrication type. Dynamic lifting system is effective only when the vehicle is in forward motion; it has three basic types: the ground effect wing surface, the hydro-foil, and the ejector jet wing.



AUTHOR: LIU Dao-zhi [0491 1418 3112]

ORG: None

TITLE: "Three Dimensional Flow in Turbines"

SOURCE: Beijing HANGKONG ZHISHI [AERONAUTICAL KNOWLEDGE] No 4,  
Apr 79 pp 34-36

ABSTRACT: In order to provide an accurate description of the transonic flow or supersonic flow around turbine blades in a high speed turbine, it is necessary to calculate the three-dimensional flow field in both radial and circumferential directions. During the early 50's, physicist Wu Zhonghua [0702 0112 5478] derived the basic equations governing three-dimensional flow in a turbine and introduced the so-called two branch flow surface theory to calculate the three-dimensional flow field using an iterative method. During the late 50's and 60's, the "streamline curvature" method was proposed which later evolved into the so-called "quasi orthogonal surface" method for solving three-dimensional flow problems. Currently, efforts to establish an improved three-dimensional flow theory are continuing, and numerical methods for obtaining direct solutions on a computer have been developed.

AUTHOR: ZHANG Jin [1728 3160]

ORG: None

TITLE: "Efficiency of an Aircraft Engine"

SOURCE: Beijing HANGKONG ZHISHI [AERONAUTICAL KNOWLEDGE] No 4,  
Apr 79 pp 37-39

ABSTRACT: In a dialogue format, this article presents a tutorial discussion on the efficiency of an aircraft engine. Specifically, the following topics are discussed: 1) losses which occur during the energy conversion process in an engine due to incomplete combustion, and wasted heat energy and kinetic energy in exhaust gas; 2) the definitions of thermal efficiency, propulsion efficiency, and overall efficiency of an engine; 3) the specific fuel consumption as a measure of engine efficiency; and 4) methods of improving engine efficiency such as increasing cruising speed, increasing the mass flow by using a turbo-fan engine, and minimizing energy waste.

AUTHOR: WANG Jun-tai [3769 1498 1132]

ORG: None

TITLE: "Introduction to Wind-Powered Generators"

SOURCE: Beijing HANGKONG ZHISHI [AERONAUTICAL KNOWLEDGE] No 4,  
Apr 79 pp 40-41

ABSTRACT: As part of the effort to develop new energy sources, a number of wind-powered electric generators have been constructed in recent years. The key components of a wind-powered generator are the windmill, the generator, and the tower. It also has a wind sensing device to adjust the windmill according to the wind direction, a control mechanism to maintain constant speed of rotation, and energy storage devices to provide electricity when wind velocity is low or absent. In the United States, it is expected that 18 per cent of the total electricity will be generated by wind power by the year 2000.

AUTHOR: ZENG Chun-hua [2582 2504 5478]

ORG: None

TITLE: "Impact Force of a Bird Colliding With an Airplane"

SOURCE: Beijing HANGKONG ZHISHI [AERONAUTICAL KNOWLEDGE] No 4,  
Apr 79 p 41

ABSTRACT: In this article, the author explains why an airplane suffers severe damage when colliding with a bird flying at low speed. Specifically, a formula for computing the impact force resulting from the sudden change of momentum during a collision is derived. Typical numerical values are substituted to show that the impact force can be as high as 130,000 kg when a bird collides with an airplane flying at 960 km per hour.

**AUTHOR:** None

**ORG:** None

**TITLE:** "News in Aeronautical Technology"

**SOURCE:** Beijing HANGKONG ZHISHI [AERONAUTICAL KNOWLEDGE] No 4,  
Apr 79 p 42

**ABSTRACT:** This article briefly describes the following new developments in aeronautical technology: 1) the development of a deuterium fluoride laser weapon by the U.S. Navy to destroy missiles in flight; the laser beam is automatically controlled by a passive infrared tracking system; 2) the development of an optical tracking device to be used on airplanes to track and photograph missiles within a range of 25 km; 3) the successful experimental research efforts by West German scientists to develop special metallic alloys for turbine blades under weightless conditions in space.

**AUTHOR:** ZHOU Hong-ren [0719 1347 0088]

**ORG:** None

**TITLE:** "Joint Application of Microwave and Infrared Techniques"

**SOURCE:** Beijing HANGKONG ZHISHI [AERONAUTICAL KNOWLEDGE] No 4,  
Apr 79 pp 44-46

**ABSTRACT:** The characteristics of an infrared sensing device such as passive operation, high resolution, immunity to RF interference, and simplicity in construction, are desirable features which complement those of a microwave radar. This article introduces a number of practical applications where infrared and microwave techniques are used jointly: 1) the radar-infrared synchronous follower system designed to improve radar performance in an interference environment and to enhance resolution capability; 2) the combination antenna which can receive both infrared and microwave signals simultaneously; 3) the composite control system which consists of an open-loop infrared control system operating in conjunction with a closed-loop radar control system.

AUTHOR: YANG Zhong-cheng 2799 0022 2052

ORG: None

TITLE: "Introduction to the U.S. Space Shuttle"

SOURCE: Beijing HANGKONG ZHISHI [AERONAUTICAL KNOWLEDGE] No 4,  
Apr 79 pp 46-48

ABSTRACT: The space shuttle is a re-usable vehicle for transporting personnel and materials between a near-earth orbit and the ground. This article presents a brief introduction to the U.S. space shuttle program currently under development. Specifically, the following topics are discussed: 1) historical background and motivation to develop the space shuttle; 2) the main components of the space shuttle and its performance; 3) the flight procedures of launching and retrieving the vehicle; 4) the basic missions of the space shuttle; 5) the main advantages of space shuttle over other types of rocket carriers; 6) its potential military values which include reconnaissance, anti-satellite, and strategic bombing missions; 7) organization of the flight crew; and 8) the two space shuttle launch bases in Florida and California currently under construction.

AUTHOR: None

ORG: None

TITLE: "Pictorial Illustrations"

SOURCE: Beijing HANGKONG ZHISHI [AERONAUTICAL KNOWLEDGE] No 4  
Apr 79 front cover, inside front cover, inside back cover, and back cover

ABSTRACT: The front cover of this issue shows pictures of a Chinese surface-to-air missile in launch ready position and during flight. The inside front cover shows pictures of members of the Chinese strategic surface-to-air missile force in training exercises. The inside back cover shows drawings illustrating the various applications of the space shuttle. The back cover shows pictures of different types of air cushion vehicles; schematic diagrams are presented to illustrate the principles of the static and dynamic air cushion lifting devices.

3012

CSO: 4009



AUTHOR: Xia Shufang [1115 0647 5364]  
Yu Xinjian [2456 2450 1696]  
Wu Zhenqian [0702 2182 0578]

ORG: Xia and Yu both of the Phytotron Laboratory, Shanghai Institute of Plant Physiology, Chinese Academy of Sciences; Wu of the Landscape Gardening Group, Shanghai Chemical Industry of Petroleum

TITLE: "The Response of Cotton and Other Plants to Ethylene"

SOURCE: Shanghai ZHIMU SHENGLI XUEBAO [ACTA PHYTOPHYSIOLOGIA SINICA] in Chinese  
Vol 5 No 1, Feb 79 pp 1-8

TEXT OF ENGLISH ABSTRACT: The effects of ethylene fumigation on cotton plants, and a number of crops, vegetables and ornamental plants were studied. Ethylene induced abnormal abscission of flower buds, flowers, young fruits and leaf blades, inflicting damages to crop production and gardening. The squares and young bolls of cotton were rather sensitive to ethylene, the percentage of squares and bolls abscised being higher with higher concentration and longer duration of fumigation while cotton bolls of ages more than 16 days were resistant to ethylene. The resistance of cotton leaves depended on their age: young, unexpanded leaves and old leaves were sensitive

[continuation of ZHIMU SHENGLI XUEBAO Vol 5 No 1, Feb 79 pp 1-8]

to ethylene, while fully expanded functioning leaves were relatively resistant. Ethylene induced many characteristic morphological abnormalities which may be used in field diagnosis of ethylene pollution. Thus, when cotton plants were exposed to ethylene, their leaves drooped and their sepals unfolded before the abscission of squares and bolls.

\* This article was received 15 May 1978.



AUTHOR: He Zhuopei [0149 0587 1014]  
Zhang Juyi [1728 5468 6851]

ORG: Both of the Shanghai Institute of Plant Physiology, Chinese Academy of Sciences

TITLE: "Studies on the Amino Acids in Plant Normal Tissues, and Their Callus and Tumor Cultures"

SOURCE: Shanghai ZHIMU SHENGLI XUEBAO [ACTA PHYTOPHYSIOLOGIA SINICA] in Chinese  
Vol 5 No 1, Feb 79 pp 9-18

EXCERPT FROM ENGLISH ABSTRACT: The present work deals with amino acid composition in relation to the growth of plant tissue cultures. Several sets of plant tissue cultures originated from the same plant as shown in Table 1 were used. All these tissue cultures have been maintained in our laboratory for a long time and ordinary tissue culture techniques were used. Using paper chromatography various amino acid constituents of these tissues have been estimated. An attempt has been made to detect whether there is any correlation between the growth of the different tissues and their amino acid composition, especially the content of hydroxyproline.

\* This article was received 18 May 1978. Cao Guoyi [2580 0948 1355] helped with the tissue cultures.

AUTHOR: Cai Ke [5591 0668]  
Zhang Yinghuang [1728 2503 3874]  
Chen Jingzhi [7115 2529 3112]  
Han Jiayu [7201 1367 3768]

ORG: All of the Shanghai Institute of Plant Physiology, Chinese Academy of Sciences

TITLE: "Effects of Gibberellin and Seven Other Growth Regulators on Boll Shedding of Cotton Plant"

SOURCE: Shanghai ZHIMU SHENGLI XUEBAO [ACTA PHYTOPHYSIOLOGIA SINICA] in Chinese  
Vol 5 No 1, Feb 79 pp 35-40

TEXT OF ENGLISH ABSTRACT: Using cotton plants grown in fields and pots, the effects of gibberellin, auxin (IAA),  $\alpha$ -naphthalene acetic acid, kinetin, 4-iodophenoxyacetic acid, 2-chloroethyl trimethyl ammonium chloride (CCC), N-dimethylemine succinamic acid (B9) and SH8 on boll shedding were studied. The results obtained indicate that the shedding of both unfertilized and fertilized bolls was remarkably decreased by treatment with gibberellin, the effect on unfertilized bolls being more pronounced than on fertilized ones. Unfertilized ovaries treated with gibberellin could develop into seedless bolls, so that one plant might produce 50-80 seedless bolls with short fibers. Of eight growth regulators used in our experiment, only gibberellin is effective in decreasing boll shedding.

[continuation of ZHIMU SHENGLI XUEBAO Vol 5 No 1, Feb 79 pp 35-40]

\* Li Lin [2621 3829] took part in the study. This article was received 3 July 1978.

AUTHOR: Zhou Peishen [0719 0160 3791]  
Tan Kehui [6223 0344 6540]  
Li Lianghi [2621 5328 3880]  
Zhang Zhongdong [1728 2973 2639]  
Zhang Guozhong [1728 0948 6927]  
Li Shouquan [2621 1343 0356]

ORG: All of the Plant Physiology and Biochemistry Laboratory, Institute of Botany, Chinese Academy of Sciences, Beijing, China

TITLE: "Temperature Induced Changes in Photosynthetic Electron Transfer in Chloroplasts of Detached Lettuce Leaves and Spinach in the Dark"

SOURCE: Shanghai ZHIMU SHENGLI XUEBAO [ACTA PHYTOPHYSIOLOGIA SINICA] in Chinese Vol 5 No 1, Feb 79 pp 41-48

EXCERPT FROM ENGLISH ABSTRACT: In experiments, the detached lettuce (*Lactuca sativa*) leaves and spinach (*Spinacia oleracea*) plants preincubated at 0° C and 20° C (spinach) or 30° C (lettuce) in the dark were used as materials. Temperature induced electron transfer changes in these chloroplasts were investigated.

\* This article was received 17 July 1978. The following helped with the study: Tang Peisong [3282 0160 2646], Zhang Hemin [1728 0735 3046], Zhao Jing [6392 0079], Li Shiyi [2621 0013 0308].

AUTHOR: Qian Luping [6929 7216 5493]  
Kuang Xiufang [6782 4423 5364]  
Xu Renbang [6079 0088 6721]  
Fang Dawei [2455 1129 1919]  
Shen Gongbao [3088 7255 2021]

ORG: All of the Shanghai Institute of Plant Physiology, Chinese Academy of Sciences

TITLE: "The Role of ATP and Fe-S Clusters in Nitrogenase-Catalyzed Reaction -- A Model Study"

SOURCE: Shanghai ZHIWU SHENGLI XUEBAO [ACTA PHYTOPHYSIOLOGIA SINICA] in Chinese  
Vol 5 No 1, Feb 79 pp 49-55

EXCERPT FROM ENGLISH ABSTRACT: Nitrogenase model systems composed of molybdate and thials or SH-containing proteins catalyzed the reduction of acetylene to ethylene in the presence of  $\text{NaBH}_4$  as the reducing agent. The catalytic activity was significantly stimulated by ATP. This stimulation could not be fully accounted for by its being a protic acid. It was affected by ATP concentration, kinds of buffer used and variation in ionic strength of the media.

\* The following took part in the study: Zhu Meizhen [2612 5019 3791], Chen Donglan [7115 0392 5695]. The article was received 21 July 1978.

AUTHOR: Pan Ruichi [3382 3843 3589]  
Wang Qixian [3769 4860 8300]  
Wang Yali [3769 7161 7787]  
Wen Zhaoqing [3306 0340 3237]  
Li Litian [7812 7787 3929]

ORG: All of the Department of Biology, South China Teachers College

TITLE: "The Effect of  $\text{B}_9$  on Some Physiological Activities of Peanut Plants"

SOURCE: Shanghai ZHIWU SHENGLI XUEBAO [ACTA PHYTOPHYSIOLOGIA SINICA] in Chinese  
Vol 5 No 1, Feb 79 pp 57-64

EXCERPT FROM ENGLISH ABSTRACT: A four-year experiment has been carried out to study the effect of the growth retardant, succinic acid 2,2-dimethylhydrazide ( $\text{B}_9$ ), on the physiology and yield of peanut plants (*Arachis hypogaea* L.). By spraying the plants with 500-1000 ppm of aqueous solution of  $\text{B}_9$  at the pegging stage, pod yield was observed to have increased 8-10 percent.

Application of  $\text{B}_9$  caused a marked increase in the thickness of leaves, especially the thickness of assimilatory tissue. The growth retardant  $\text{B}_9$  not only greatly increased the chlorophyll content of peanut leaves, but also accelerated the rate of leaf photosynthesis, and consequently the accumulation of dry matter in the whole

[continuation of ZHIMU SHENGLI XUEBAO Vol 5 No 1, Feb 79 pp 57-64]

plant was increased. Compared with the control, the young leaves of the treated plants showed higher rates of transpiration due to the increase in the number of stomata.

\* The following took part in the study: Yu Xiuqian [5509 4836 3791], Meng Lirong [5040 7787 1369], Ou Yangqiong [0575 5333 8025]. This article was received 2 August 1978.

AUTHOR: Liu Yu [0491 1946]  
Li Zhonguo [2621 2182 0948]  
Jiao Xinzhi [3542 2450 0037]  
Yu Shuren [0151 0647 2429]  
Xie Xumin [6200 1331 3046]  
Zheng Quande [1728 0356 1795]  
Zhu Manzhu [2612 3352 1172]

ORG: Liu, Li, Jiao and Yu all of the Shanghai Institute of Plant Physiology, Chinese Academy of Sciences; Xie, Zheng and Zhu all of the Zhejiang Agricultural University

TITLE: "Studies on the Induction of Male Sterility by Ethrel and Effects of Ethylene Fumigation on Wheat Plants"

SOURCE: Shanghai ZHIMU SHENGLI XUEBAO [ACTA PHYTOPHYSIOLOGIA SINICA] in Chinese Vol 5 No 1, Feb 79 pp 71-81

TEXT OF ENGLISH ABSTRACT: While the male sterility was induced with Ethrel (4000 ppm) at the early boot stage of wheat, the rate of release of ethylene in the spikes remarkably increased and reached a peak within 10 days after spraying. Treatment with ethylene fumigation (10-100 ppm, 12 hours per day for 3 days) at the same stage obviously increased sterility, but no effects were observed on other aspects of

[continuation of ZHIMU SHENGLI XUEBAO Vol 5 No 1, Feb 79 pp 71-81]

growth and development of wheat plants. Pretreatment with  $\text{AgNO}_3$  (500 ppm) partly reversed the effects of Ethrel and ethylene. The fate of Ethrel, mode and time of its action and the role of ethylene in the induction of male sterility were discussed.

\* The following also participated in the study: Yu Ziwan [0205 1311 2429], Yang Weidong [2799 5898 2639], Tan Chang [6223 1603], Li Lin [2621 3829]. This article was received 9 September 1978.

AUTHOR: Li Shuxuan [2621 2562 6513]  
Fu Bingtong [0265 3521 6639]

ORG: Both of the Department of Horticulture, Zhejiang Agricultural University

TITLE: "Hormonal Control of Sex Expression in Cucumber and Chinese White-Flowered Gourd"

SOURCE: Shanghai ZHIMU SHENGLI XUEBAO [ACTA PHYTOPHYSIOLOGIA SINICA] in Chinese Vol 5 No 1, Feb 79 pp 83-92

EXCERPT FROM ENGLISH ABSTRACT: The sex expression of cucumber (*Cucumis sativus* L.) and Chinese white-flowered gourd (*Lagenaria leucantha* Rusby) was found to be controlled by foliar spray with ethephon and gibberellin. Ethephon (2-chloroethyl phosphonic acid) at a concentration of 150 ppm caused an increase of femaleness and an inhibition of male flowers, and gibberellin caused an increase of maleness and inhibition of female flowers.

Under natural conditions, Chinese white-flowered gourds produced nearly all staminate flowers and very few or no pistillate flowers on the main stem. As treated with ethephon, pistillate flowers may be produced at each node from the 10th to the 20th continuously. But the sex expression on the side branches was little affected.



[continuation of ZHIMU SHENGLI XUEBAO Vol 5 No 1, Feb 79 pp 83-92]

\* Help was received from Yang Ruiyin [2799 3843 5419]. This article was received on 15 September 1978.

8650

CSO: 4009

## ENGINEERING

AUTHOR: Qian Lingxi [6929 0109 1505]  
Zhong Wenxie [6945 8001 0533]

ORG: Both of the Institute of Engineering Mechanics

TITLE: "A Method for Optimum Design of Structures"

SOURCE: Dalian DALIAN GONGXUEYUAN XUEBAO [JOURNAL OF DAIEN ENGINEERING INSTITUTE]  
in Chinese No 1, Mar 79 pp 1-21

TEXT (F ENGLISH ABSTRACT: A truss with described structural arrangement is taken into account as an object. The sectional areas of the bars are revised so that the structure has the lightest weight under various loading cases and constraints (stresses, displacement, sectional areas, etc.). In this paper, by the use of mechanical concepts, the method of nonlinear programming in combination with the criteria design is employed to organize an optimum procedure. In general, reanalysis is reduced to about five times.

Four examples are illustrated, of which three are usually used in references, with the other being a practical engineering structure, a spatial network of roof with

[continuation of DALIAN GONGXUEYUAN XUEBAO No 1, Mar 79 pp 1-21]

diameter of 91 meters.

\* This article was received 10 December 1978.

**AUTHOR:** Cheng Gangdong [4453 5105 2639]

**ORG:** Institute of Engineering Mechanics

**TITLE:** "An Application of Linear Programming in Optimum Structural Design and the Corresponding Sparse Algorithm"

**SOURCE:** Dalian DALIAN GONGXUEYUAN XUEBAO [JOURNAL OF DAIREN ENGINEERING INSTITUTE] in Chinese No 1, Mar 79 p 22-31

**TEXT OF ENGLISH ABSTRACT:** In this paper, linear programming and optimality-criterion-based algorithms are combined to solve some optimum structural design problems, which are only subjected stress constraints and minimum area constraints. Taking advantage of sparsity of the matrix produced in optimum structural design, a sparse algorithm is suggested in this paper.

\* This article was received 15 December 1978.

**AUTHOR:** Zhou Chengti [0719 2110 2032]

**ORG:** Institute of Engineering Mechanics

**TITLE:** "The Theory of Generalized Stress Intensity Factor"

**SOURCE:** Dalian DALIAN GONGXUEYUAN XUEBAO [JOURNAL OF DAIREN ENGINEERING INSTITUTE] in Chinese No 1, Mar 79 pp 32-47

**TEXT OF ENGLISH ABSTRACT:** This paper proposes a new theory of stress intensity factor for analyzing crack problems with blunt tip. This new theory is called "The Theory of Generalized Stress Intensity Factor" (Theory of  $K_{1g}$ ). According to this theory, the stress intensity factor around the crack tip is a function of several variables, while Irwin's stress intensity factor  $K_1$  is a constant, and therefore the factor  $K_1$  becomes a particular case of the generalized factor  $K_{1g}$ . The formulation of this generalized factor is  $K_{1g} = \eta K_1$ . Here, the coefficient  $\eta$  which is also a function of several variables represents the correlations between the stress intensity factor and the radius of curvature  $R_0$  at the blunt tip. When the radius of curvature  $R_0$  tends to zero or the distance  $r$  from the crack tip approaches the crack tip ( $r \rightarrow 0$ ), the coefficient  $\eta \rightarrow 1$ , then  $K_{1g} = K_1$ .

By use of the theory of  $K_{1g}$ , the relations between the stress concentration factor  $K$

[continuation of DALIAN GONGXUEYUAN XUEBAO No 1, Mar 79 pp 32-47]

and stress intensity factor  $K_I$  are investigated. Thus the new theory becomes a union that joins the ordinary criterion of strength of material and the criterion of linear elastic fracture of mechanics (LEFM).

\* This article was received 17 October 1978.

AUTHOR: Zhou Chengti [0719 2110 2032]

ORG: Institute of Engineering Mechanics

TITLE: "The Nature of Singularity at the Crack Tip"

SOURCE: Dalian DALIAN GONGXUEYUAN XUEBAO [JOURNAL OF DAIREN ENGINEERING INSTITUTE] in Chinese No 1, Mar 79 pp 48-59

TEXT OF ENGLISH ABSTRACT: This paper proposes a method for analyzing the nature of singularity at an elastic crack tip. According to Muskhelishvili's exact solution of an elastic elliptical hole, the variations of the stress fields of different crack tips are determined as the tip of the elliptical-crack model changes from a blunt tip to a sharp tip. The stress field at the blunt tip is represented by a function of several variables. The different limits of this function describe the nature of singularity at the crack tip. With this method, the states of stresses and boundary conditions both at the blunt crack tip and sharp crack tip are discussed.

In this paper, the stresses at the crack tip are divided into two different kinds: i.e., intrinsic stress and approaching stress. The intrinsic stress is the stress that satisfies all the boundary conditions, while the approaching stress is the stress that approaches the crack tip during the process of degenerating from an



[continuation of DALIAN GONGXUEYUAN XUEBAO No 1, Mar 79 pp 48-59]

elliptical crack to a crack with a sharp tip. By use of the concept of intrinsic stress and approaching stress, the nature of the singularity of the stress field at the crack tip can be analyzed, and the cause for the formation of the "sub-crack" during the blunting process of the sharp tip can be explained.

\* This article was received 17 October 1978.

AUTHOR: Wu Ruifeng (6762 3843 6912)  
Lu Moxiang (0712 0735 4382)  
Xi Xiaofeng (1153 5135 7364)

ORG: All of the Institute of Engineering Mechanics

TITLE: "Elasto-plastic Analysis and Crack Growth Analysis of Reinforced Masonry Shear Wall"

SOURCE: Dalian DALIAN GONGXUEYUAN XUEBAO [JOURNAL OF DAIREN ENGINEERING INSTITUTE]  
in Chinese No 1, Mar 79 pp 60-72

TEXT OF ENGLISH ABSTRACT: This paper describes a method of analysis for elastic-plasticity and crack growth of reinforced masonry shear wall subjected to the constant uniform vertical load and the gradually increasing lateral load. The maximum lateral load and the cracking pattern are determined in this paper. An optimum acceleration factor is presented to improve the convergence rate in the increment initial stress method. A simplified model of reinforced masonry is presented.

\* This article was received 19 December 1978.

AUTHOR: None

ORG: Department of Mathematics and Mechanics, Institute of Engineering Mechanics, Programming and Design Teaching and Research Group, Computer Group, Structural Improvement Research Group

TITLE: "Structured FORTRAN Language and Its Implementation"

SOURCE: Dalian DALIAN GONGXUEYUAN XUEBAO [JOURNAL OF DAIREN ENGINEERING INSTITUTE] in Chinese No 1, Mar 79 pp 73-78

TEXT OF ENGLISH ABSTRACT: In this paper, the main features of structured FORTRAN language are discussed. It is shown how a preprocessor (translator) from structured FORTRAN to FORTRAN is implemented on a TQ-16 computer.

\* This article was received 5 January 1979. It was authored by Chi Zhongxian [6688 1813 0341].

AUTHOR: None

ORG: Basic Organic Chemical Engineering Teaching and Research Group, Department of Chemical Engineering

TITLE: "Toluene Disproportionation Catalyst Evaluating Set: Semi-pilot Plant Scale Moving Bed"

SOURCE: Dalian DALIAN GONGXUEYUAN XUEBAO [JOURNAL OF DAIREN ENGINEERING INSTITUTE] in Chinese No 1, Mar 79 pp 79-92

TEXT OF ENGLISH ABSTRACT: This article introduces a toluene disproportionation catalyst evaluating set, a semi-pilot plant scale moving bed which simulates industrial conditions. The catalyst charge is approximately 5 kg and the effective capacity of the reactor is 670 milliliters. The overall structure of this small-scale moving bed is patterned after the catalyst recycling system of a commercial apparatus. Hence the catalyst moved continuously through the coaxially installed reactor and generator, and then was sent by the airlift to the recycle tank. Because the toluene disproportionation process was not complicated by the factors of mass and heat transfer, the major consideration in the design of the linear size of the reactor was to match the reactor's residue time and distribution conditions to that of commercial equipment. With this small-scale apparatus, in general after approximately 500 hours of continuous operation, indications of the catalyst's

[continuation of DALIAN GONGXUEYUAN XUEBAO No 1, Mar 79 pp 79-92]

equilibrium activities, selectivities, carbon deposits, and regeneration characteristics can be obtained, and furthermore they are quite consistent with commercial results. In addition, comparative reference indexes of the catalyst's mechanical properties may be obtained at the same time. After a fairly long continuous running time, the approximate lifetime of the catalyst can be estimated. It is concluded that this small-scale moving bed is one of the more comprehensive and effective catalyst evaluation apparatuses.

\* This article was received 11 November 1978.

AUTHOR: Yuan Jingxia [5913 2529 0204]  
Wei Zhaozheng [7614 0340 2973]  
Guo Huicong [6753 2585 5115]

ORG: All of the Precision Machine Tools and Precision Technology Research Group

TITLE: "The Calculation of the Stiffness of Structural Elements of Machine Tools by the Finite Element Method"

SOURCE: Dalian DALIAN GONGXUEYUAN XUEBAO [JOURNAL OF DAIREN ENGINEERING INSTITUTE]  
in Chinese No 1, Mar 79 pp 93-102

TEXT OF ENGLISH ABSTRACT: This paper describes a method of calculating the stiffness of structural elements of machine tools treated as a combined plate structure by means of the finite element method and introduces the main feature of the calculating program. This paper presents the results of calculation of a column model with different meshes and the results are compared with those obtained from the theoretical analysis. Finally, the results of the calculation of the crossbeam of a numerical-controlled planomilling machine are presented.

\* This article was received 22 December 1978.

AUTHOR: He Xiwon [0149 3356 2429]

ORG: Electronic Circuitry Teaching and Research Group

TITLE: "The Research of Calibrating the Error of Linear IC Tester"

SOURCE: Dalian DALIAN GONGXUEYUAN XUEBAO [JOURNAL OF DAIREN ENGINEERING INSTITUTE]  
in Chinese No 1, Mar 79 pp 103-112

TEXT OF ENGLISH ABSTRACT: This paper essentially introduces the method of calibrating the error of linear IC tester, including the calibration for various ranges of input offset voltage, input offset current, input bias current, open-loop DC voltage gain and common mode rejection ratio. It introduces some practical circuits, at the same time indicating the operating steps, the necessary processes and the results of calculation.

\* This article was received 9 November 1978.

AUTHOR: Zhao Dayou [6392 1795 2589]

ORG: Ship Vibration Research Group

TITLE: "On the Approximate Computation of the Natural Frequency of Vertical Modes of Main Hull Vibration"

SOURCE: Dalian DALIAN GONGXUEYUAN XUEBAO [JOURNAL OF DAIREN ENGINEERING INSTITUTE]  
in Chinese No 1, Mar 79 pp 113-126

TEXT OF ENGLISH ABSTRACT: This paper presents several new formulas for computing the natural frequency of vertical modes of main hull vibration. On the basis of energy method and transfer matrix method, combined with the experiments on ships and absorbing foreign experience, we intend to propose in this paper some approximate formulas for computing the natural frequency of vertical modes of main hull vibration:

1. in case the elements of midship are known;
2. at the primary step of ship design.

This paper may be used as a reference for departments of ship design, ship employment and ship inspection.



[continuation of DALIAN GONGXUEYUAN XUEBAO No 1, Mar 79 pp 113-126]

\* The following took part in various aspects of this study: Luo Zhiyong [5012 1807 7167], Yang Xiaodong [2799 2556 2639], Shi Zhenxiang [0670 2182 7449], Chen Dejiu [7115 1795 0036]. Chen Mingzhi [7115 6900 1395] of the Shanghai Shipping Institute and Ma Guangrong [7456 0342 1350] of the Shanghai Shipping Design Institute helped collect the material. This article was received 30 December 1978.

AUTHOR: Chen Shouyu [7115 1343 3550]

ORG: Hydroelectric Station Teaching and Research Group

TITLE: "Study of the Problems of the Annual Flow Regulation"

SOURCE: Dalian DALIAN GONGXUEYUAN XUEBAO [JOURNAL OF DAIREN ENGINEERING INSTITUTE] in Chinese No 1, Mar 79 pp 127-135

TEXT OF ENGLISH ABSTRACT: Water regulation or control by storage capacities is often one of the main water resource problems. The hydrologic magnitude has a significant stochastic component, and the theory of probability and statistics may be applied to determine the probability of water supply, mean water deficit and reservoir surplus of the annual flow regulation, that is, the increase of low flows from water stored partly during flood seasons.

In the first part, this paper discusses the probability of the annual flow regulation. In the second part, this paper develops a method of calculating the mean water deficit and surplus of the annual flow regulation. It starts with the following formula

$$V_p = \alpha_p (\alpha - 1) \bar{Q}_m \bar{T}. \quad (1)$$

where  $K_{EP}$  may be determined by the probability distribution function  $F(K_E)$ ,

$$f(K_s) = \int_0^{\infty} \int_{K_s/K_s}^{\infty} \phi_1(K_r) \phi_2(K_s) dK_r dK_s. \quad (2)$$

Then equations of the mean water surplus and deficit are given as

$$\bar{a}_s = \int_0^{\infty} f(p) dp, \quad (3)$$

$$\bar{b}_s = \int_0^1 f(p) dp. \quad (4)$$

\* This article was received 1 April 1978.

8650

C50: 4009

## GEOFYSICS

AUTHOR: Huang Yongnian [7806 3057 1628]

ORG: None

TITLE: "On Some Problems Regarding Solar Cosmic Ray Propagation"

SOURCE: Beijing DIQIU WULI XUEBAO [ACTA GEOPHYSICA SINICA] in Chinese No 2, Apr 79  
pp 97-108

TEXT OF ENGLISH ABSTRACT: Based on the large-scale interplanetary solar magnetic sector, this paper describes a new "sector coordinate system" in which equations of solar cosmic ray propagation were derived and one of the diffusion models discussed. The solution of the diffusion equation depends on the solar longitude of the flare that produces cosmic rays and on the intensity-time characteristics of solar cosmic ray propagation. This model agrees well with the observational results.

AUTHOR: Huang Xude [7806 4872 1795]

ORG: None

TITLE: "Some Problems in the Seismic Exploration of Complicated Basins"

SOURCE: Beijing DIQIU WULI XUEBAO [ACTA GEOPHYSICA SINICA] in Chinese No 2, Apr 79  
pp 109-139

TEXT OF ENGLISH ABSTRACT: In South China, there are several small to medium basins which are characterized by the abundance of such features as multi-layering, lateral heterogeneity, thick sedimentary covers, variable rock facies, repeated erosions and varieties of faulting, etc. These adverse geological conditions entail corresponding complications in the application of seismic methods. Examples are disturbances from multiple reflections and lateral waves, variable wave velocities, distortions from deep-seated structures and others. All these give rise to difficulties in extracting information concerning palaeozoic strata. The present paper discusses some of the views and methods to counter these difficulties.

AUTHOR: Li Qingzhong [2621 1987 1813]  
Yu Shoupeng [0205 1108 2590]  
Liu Wenlin [0491 7186 2651]  
Liu Chengzhang [0491 2052 2973]

ORG: None

TITLE: "A Case History of Seismic Survey on Dongxin Oil Field -- A Practical Example of 3-D Seismic Interpretation on a Complex Fault Block Structure"

SOURCE: Beijing DIQIU WULI XUEBAO [ACTA GEOPHYSICA SINICA] in Chinese No 2, Apr 79 pp 140-155

TEXT OF ENGLISH ABSTRACT: Dongxin Oil Field is a typical complex structure cut by many faults. In this oil field, a precise seismic survey proved to be quite effective. Some techniques of early 3-D seismic interpretation (stereo-migration) are described in this paper. Essentially they are:

- 1) A strict three-dimensional network of profiles.
- 2) The recognition and the utilization of some abnormal events.
- 3) The closure check of fault planes.
- 4) The determination of spatial position of every reflection event by the  $\Delta t_1$  diagram.
- 5) The 3-D migration by direct correlation, i.e., laterally rearranging all the

[continuation of DIQIU WULI XUEBAO No 2, Apr 79 pp 140-155]

reflection events from a series of 2-D migrated depth sections for forming a new series of 3-D migrated depth sections.

These techniques are valuable to the 3-D seismic prospecting and to the geological interpretation of fault planes.

In recent years, a simpler structure was found below this complex shallow structure by use of the digital seismic data. Several figures are presented showing the typical geological relationship between the shallow structure and the deep one.



AUTHOR: Fu Liangkui [0265 5328 7608]

ORG: None

5

TITLE: "Some Theoretical Problems in the Application of Magnetic Induced Polarization Method in Geophysical Prospecting"

SOURCE: Beijing DIQIU WULI XUEBAO [ACTA GEOPHYSICA SINICA] in Chinese No 2, Apr 79 pp 156-168

TEXT OF ENGLISH ABSTRACT: The present paper discusses certain problems currently existing in the theory of magnetic induced polarization method. Mistakes and imperfections appearing in some literature are pointed out. New theoretical formulas and anomalous profile curves are presented together with results of model experiments and some field data.

AUTHOR: Duan Xingbei [3008 2502 0554]  
Li Pingyi [2621 1627 0001]

ORG: Both of the Institute of Geophysics, Chinese Academy of Sciences

TITLE: "A Method for Reduction of Magnetic Anomaly ( $\Delta Z$ ) to the Magnetic Pole"

SOURCE: Beijing DIQIU WULI XUEBAO [ACTA GEOPHYSICA SINICA] in Chinese No 2, Apr 79 pp 169-180

TEXT OF ENGLISH ABSTRACT: The observed magnetic anomaly ( $\Delta Z$ ) was distorted by the oblique direction of rock magnetization. With the use of the functions

$$\frac{\sin x}{x} \cdot \frac{\sin y}{y},$$

the magnetic anomaly ( $\Delta Z$ ) can be reduced to the magnetic pole so that these distortions can be eliminated. Then, the three components of magnetic anomaly of the vertical magnetization  $\Delta Z_1$ ,  $\Delta X_1$ ,  $\Delta Y_1$ , their derivatives and the upward and downward continuations can be obtained. Magnetic data may be further interpreted by using this method.

AUTHOR: Yao Zhenxing [1202 2182 5281]

ORG: Institute of Geophysics, Chinese Academy of Sciences

TITLE: "Generalized Reflection Coefficients for a Layered Medium and Asymmetrical Source"

SOURCE: Beijing DIQIU WULI XUEBAO [ACTA GEOPHYSICA SINICA] in Chinese No 2, Apr 79 pp 181-194

TEXT OF ENGLISH ABSTRACT: The method of reflectivity in the calculation of synthetic seismograms is generalized in the present paper to the case of an asymmetric source. Some improvement is also made in the method of computation of the generalized reflection coefficients.

AUTHOR: Chen Yong [7115 9581]  
Gong Naiguang [5105 0035 0342]  
Yao Xiaoxin [1202 1321 2450]

ORG: All of the Institute of Geophysics, State Seismological Bureau

TITLE: "Fracture and Frictional Sliding of Rock Samples with Saw Cut"

SOURCE: Beijing DIQIU WULI XUEBAO [ACTA GEOPHYSICA SINICA] in Chinese No 2, Apr 79 pp 195-200

TEXT OF ENGLISH ABSTRACT: Uniaxial tests were performed on cylindrical samples of gabbro, granite and marble containing pre-fabricated surfaces (simple saw cut, polished saw cut surfaces) oriented at various angles with respect to the load axis. The major object of the tests was to investigate both the fracture and the frictional sliding of the samples. When the polished saw-cut surface was perpendicular to the load axis (combined sample), the strength, fracture pattern and the precursors were investigated. For those samples with simple saw-cut surfaces oriented at  $65^\circ$  or  $75^\circ$  to the load axis, there existed some stick slips along the saw cut before the macrofracture occurred; the stress drop and axial displacement in the stick slip were much less than that in the eventual fracture. It is found that the

[continuation of DIQIU WULI XUEBAO No 2, Apr 79 pp 195-200]

fracture usually occurred on one side of the saw cut at first, then developed through the saw cut surface to another side of the samples. The implication of the experimental results to earthquake prediction was briefly discussed.

8650

CSO: 4009

MEDICINE

AUTHOR: XIA Zhenyi [1115 6966 1138]  
ZHANG Mingdao [1728 2494 1497]

ORG: Both of Psychopathy Teaching and Research Group of Shanghai First College of Medicine and Shanghai Municipality Center for Prevention and Treatment of Psychopathy...

TITLE: "A Heredofamilial Study of Schizoaffective Psychosis"

SOURCE: Beijing ZHONGHUA SHENJING-JINGSHENKE ZAZHI [CHINESE JOURNAL OF NEUROLOGY AND PSYCHIATRY] in Chinese No 1, 5 Mar 79 pp 1-3

ABSTRACT: In 1970, the World Health Organization (WHO) announced the diagnosis indices of schizoaffective psychosis (SAP) to include (1) obvious depression or mania, with schizoid symptoms at the same time; (2) cycloid attacks with good remissions. Based upon these two indices, 70 cases of recent years are collected; of the group, forty (57.1 percent) have heredofamilial history of this disease. The genetic relationship of various psychotic diseases, distributed among the members of first, second, and third degree relations of the 40 cases is studied. The phenomenon of skipping a generation is indicated in families of five of the group.

AUTHOR: SHEN Qijie [3088 0366 2638]  
HUANG Nengda [7806 5174 6671]

ORG: Both of Psychopathy Teaching and Research Group, Hunan College of Medicine

TITLE: "Clinical Characteristics of Graft Schizophrenia"

SOURCE: Beijing ZHONGHUA SHENJING-JINGSHENKE ZAZHI [CHINESE JOURNAL OF NEUROLOGY AND PSYCHIATRY] in Chinese No 1, 5 Mar 79 pp 4-6

ABSTRACT: Pseudo-schizophrenia, or graft schizophrenia, is also called graft hebephrenia, the name given by Kraepelin. It is a complex disease, not really rare but there has been no report of it domestically. This paper analyzes the data of 26 cases, 12 males and 14 females, aged 13-28 years, treated at the Hunan Provincial Psychopathic Hospital, from 1967 to April 1978. The symptoms, treatment procedures, and short term treatment effects are described and discussed.

AUTHOR: CHEN Changhui [7115 2490 1920]  
LYU Jinyuan [0712 6855 0337]

ORG: CHEN of Department of Neurology and Psychiatry, Henan College of Medicine;  
LYU of Henan Provincial Center of Psychopathy

TITLE: "A Further Study of Disturbance of the Thinking Process in Schizophrenia"

SOURCE: Beijing ZHONGHUA SHENJING-JINGSHENKE ZAZHI [CHINESE JOURNAL OF NEUROLOGY AND PSYCHIATRY] in Chinese No 1, 5 Mar 79 pp 7-10

ABSTRACT: As a continuation of the previous paper ["Preliminary Study of Disturbance of the Thinking Process in Schizophrenia" ZHONGHUA SHENJING-JINGSHENKE ZAZHI, No 7, 1963 p 126,] this paper studies the ability of conceptualizing, judging, deducing, and reasoning before and after treatment for the purpose of understanding the nature of the disorder and the changes before and after the treatment. The subjects of this study include 22 female and 10 male hospitalized patients. The method of study and the result of analysis are reported.

AUTHOR: SHEN Yugun [3088 3342 6722]  
HOU YI [0186 3085]

ORG: Both of Department of Psychopathy, Third Hospital, Beijing College of Medicine

TITLE: "Clinical Features and Treatment of Tardive Dyskinesia"

SOURCE: Beijing ZHONGHUA SHENJING-JINGSHENKE ZAZHI [CHINESE JOURNAL OF NEUROLOGY AND PSYCHIATRY] in Chinese No 1, 5 Mar 79 pp 11-13

ABSTRACT: In recent years, there have been continuous reports from foreign countries about tardive dyskinesia induced by antipsychotic drugs. It is a form of involuntary, rhythmic, and systematized motion, or uncoordinated motions. The affliction becomes more severe when the patient is emotionally excited and disappears when he is asleep. It often occurs after prolonged application or large doses of antipsychotic drugs, yet is often more obvious when the drug application is either reduced or discontinued. According to foreign reports, the incidence is 0.5 to 40 percent, having a tendency of rising in recent years. In the past 5 years, the authors came across 25 such cases. The clinical manifestations and the management procedures are reported.



AUTHOR: None

ORG: Department of Psychiatry, Third Hospital, Beijing College of Medicine;  
Department of Psychopathy Prevention and Treatment, Haiding District, Beijing

TITLE: "Experiences in the Establishment and Consolidation of Three-tier  
Network for the Prevention and Treatment of Psychosis in Rural Districts"

SOURCE: Beijing ZHONGHUA SHENJING-JINGSHENKE ZAZHI [CHINESE JOURNAL OF  
NEUROLOGY AND PSYCHIATRY] in Chinese No 1, 5 Mar 79 pp 14-16

ABSTRACT: Since June 1974, the various people's communes of Haiding District have gradually developed a program to train a team of medical service persons for the prevention and treatment of psychotic diseases. By February 1977, a general survey of the rural population had been basically completed. Incidences of schizophrenia was found to be 1.8 percent, other psychosis 0.6 percent, mental deficiency 2.5 percent, epilepsy 2.1 percent. A system of periodical and consistent care and treatment for these patients has been established, and 800 home sick-beds have been set up to care for the sick. There is also a program for continuous care of those who have recovered from mental diseases for the purpose of preventing recurrence. The concrete mental health program of the district is described.

AUTHOR: BIAN Kexin [0593 0344 0207]

ORG: Second Outpatient Clinic, Yanzhou County People's Hospital, Shandong Province

TITLE: "Report of One Case of Epileptic Vertigo"

SOURCE: Beijing ZHONGHUA SHENJING-JINGSHENKE ZAZHI [CHINESE JOURNAL OF  
NEUROLOGY AND PSYCHIATRY] in Chinese No 1, 5 Mar 79 p 16

ABSTRACT: This paper reports the case of a 36 year old man. One day, 11 years previously, he suddenly felt dizzy, followed by vomiting, but recovered in ten minutes or so. Since then, he had had similar attacks every few days; before seeking treatment, the attacks had become more frequent, as often as 3-5 times a day, while the symptoms had become more severe. He was treated with antiepileptic drugs, and has not had an attack for 11 months since the treatment began.

AUTHOR: ZHANG Zhenliu [1728 6297 3461]  
LI Zuohan [2621 0155 3352]

ORG: Both of Department of Neurology , Nanjing Center for Prevention and Treatment of Psychosis and Neurosis

TITLE: "Clinical Analysis of Acute Polyradiculoneuritis (A Report of 514 Cases)"

SOURCE: Beijing ZHONGHUA SHENJING-JINGSHENKE ZAZHI [CHINESE JOURNAL OF NEUROLOGY AND PSYCHIATRY] in Chinese No 1, 5 Mar 79 pp 17-21

ABSTRACT: Acute polyradiculoneuritis has been on the rise in recent years. There have been some scattered epidemics in some regions in China and the mortality is relatively high. From 1955 to 1977, the hospital treated 514 such cases, 365 males and 149 females. The youngest of the group was 8 months of age and the oldest was 78 years, but 35.4 percent were younger than 15 and 33.1 percent were between 16 and 30 years of age. Although 68.3 percent of the group had had localized or general infection before the onset of the disease, the others did not. There were 56 deaths in the group. The symptoms and the pathogenesis are discussed.

AUTHOR: GUO Yupu [6751 3768 3877]

ORG: Department of Neurology , Capitol Hospital, Chinese Academy of Medicine

TITLE: "Pathological Features of Acute Polyradiculoneuritis"

SOURCE: Beijing ZHONGHUA SHENJING-JINGSHENKE ZAZHI [CHINESE JOURNAL OF NEUROLOGY AND PSYCHIATRY] in Chinese No 1, 5 Mar 79 pp 22-25

ABSTRACT: With the continuous increase of incidence in recent years, acute polyradiculoneuritis has become one of the common diseases in the department of psychiatry. There have been relatively numerous clinical reports in China, but reports on pathological data of this disease are few. Case histories of three patients, all died of the disease, are given for the purpose of combining the clinical data and the autopsy data for the investigation of the pathogenesis, mechanism, and treatment of this disease.

AUTHOR: TANG Xiaofu [3282 2556 5346]  
YANG Bingxian [2799 4426 6343]

ORG: Both of Department of Neurology, Capitol Hospital, Chinese Academy of Medicine

TITLE: "Electromyogram and Motor Nerve Conduction Speed in Acute Polyradiculoneuritis"

SOURCE: Beijing ZHONGHUA SHENJING-JINGSHENKE ZAZHI [CHINESE JOURNAL OF NEUROLOGY AND PSYCHIATRY] in Chinese No 1, 5 Mar 79 pp 26-30

ABSTRACT: It has been pointed out that incidence of acute polyradiculoneuritis in rural villages of China is rather high. In the past, its diagnosis had depended mainly upon the two items of clinical manifestation and the change in cerebrospinal fluid, but recent studies indicate that the protein content of the cerebrospinal fluid does not necessarily increase in the early stage of this disease and its clinical manifestation varies a great deal. In the foreign countries, electromyography and motor nerve conduction velocity have long been used to assist the diagnosis and prognosis of this disease. Although some hospitals in China have adopted the techniques, yet there have been no reports of the work. From 1961 to 1977, the authors used these techniques in conjunction with the diagnosis of acute or chronic recurrent polyradiculoneuritis. A total of 30 cases were involved. The clinical data of the group are reported.

AUTHOR: HOU Xide [0230 3556 1795]

ORG: Department of Neurology, Nanjing College of Medicine Hospital

TITLE: "A New Method for Concentrating Cerebrospinal Fluid Cells"

SOURCE: Beijing ZHONGHUA SHENJING-JINGSHENKE ZAZHI [CHINESE JOURNAL OF NEUROLOGY AND PSYCHIATRY] in Chinese No 1, 5 Mar 79 pp 31-33

ABSTRACT: Following a general discussion of the clinical significance of cytological examination of cerebrospinal fluid, and major difficulties and recent advancements in the techniques of such examination, this paper describes the apparatus, technique, and advantages of the centrifugalization technique designed by the author and colleagues. Two photos and a drawing depicting the structure of the instruments are included.

AUTHOR: LYU Chuanzhen [0712 0278 4176]  
SHI Yongde [2457 3057 1795]  
TANG Zhensheng [0781 6966 3932]  
XIAO Baoguo [5135 0202 0948]

ORG: LYU, TANG, XIAO of Neuropathy Research Office, Department of Neurology, Huashan Hospital, SHI of Biophysics Teaching and Research Group, Shanghai First College of Medicine

TITLE: "A Study of Hemadromography and Platelet-electrophoresis in Apoplectic Patients"

SOURCE: Beijing ZHONGHUA SHENJING-JINGSHENKE ZAZHI [CHINESE JOURNAL OF NEUROLOGY AND PSYCHIATRY] in Chinese No 1, 5 Mar 79 pp 34-36

ABSTRACT: Hemadromographic characteristic, fibrinogen and blood clotting anomalies, and changes in platelet function of apoplectic patients have been considered as dangerous factors. This paper reports determination of five hemadromographic indices, including whole blood viscosity, plasma viscosity, fibrinogen concentration, red cell pressure aggregation, and red cell electrophoresis, of 205 apoplectic patients, 163 ischemic and 42 hemorrhagic. Platelet and red cell electrophoresis of healthy persons and ischemic apoplectic patients are also compared to observe the difference of platelet surface of the normal and the diseased. The value of these changes in the diagnosis of apoplexy is assessed.

AUTHOR: ZHAO Keming [6392 0344 2494]  
WANG Tianhe [3769 1131 3109]

ORG: Both of Department of Brain System, Tianjin Municipal Second Zhongxin Hospital

TITLE: "Preliminary Clinical Application of the Drum Type I Ventriculo-abdominal Shunt"

SOURCE: Beijing ZHONGHUA SHENJING-JINGSHENKE ZAZHI [CHINESE JOURNAL OF NEUROLOGY AND PSYCHIATRY] in Chinese No 1, 5 Mar 79 pp 37-40

ABSTRACT: Beginning in 1970, the authors, with the help of Tianjin Municipal Rubber Products First Plant, Tianjin Electrical Instrument Plant, etc. repeatedly studied the manufacture of three types of hydrocephalus shunt instruments: the drum I, the drum II, and the tube types. From April 1975 to April 1978, they used the drum I type (i.e. the Heyer-Pudenz type) made by themselves in clinical ventriculo-abdominal shunt for 20 patients. The instrument was found to be more suitable for hydrocephalus in children. In the future, for adults, the drum II type (i.e. the Mishler type) should be used.



AUTHOR: ZHANG Yiqin [1728 0076 2953]  
YUAN Shengji [5913 4141 0679]  
ZHOU Zhichun [0719 1807 3196]  
NIAN Yongxin [1628 3057 9515]

ORG: All of Datong Special School of Medicine

TITLE: "Report of One Case of Kline-Levin Syndrome"

SOURCE: Beijing ZHONGHUA SHENJING-JINGSHENKE ZAZHI [CHINESE JOURNAL OF NEUROLOGY AND PSYCHIATRY] in Chinese No 1, 5 Mar 79 p 40

ABSTRACT: Kleine-Levin syndrome is a disease of periodical sleepiness and pathological hunger. This paper reports the case of a 14 year old boy, who sought treatment from the authors in November 1977. In the middle of previous July, the boy first suffered "signs" of a cold; then, suddenly he became very sleepy. The attack of sleepiness occurred once every two weeks to a month, and each attack lasted 5-7 days. During an attack, he slept continuously and perspired a great deal. He woke up only to eat and to go to the bathroom, before going immediately back to sleep, day and night. Treatment with ephedrinus, etc. appeared to lengthen the interval between attacks and shorten the duration and lessen the severity of the attacks. The patient is still being treated and observed at the time of the report.

AUTHOR: JIANG Ziqiang [3068 5261 1730]

ORG: Department of Neurosurgery, Second Hospital, Jiangxi College of Medicine

TITLE: "Diagnosis and Surgical Treatment of Acoustic Neurinoma: Report of 30 Cases"

SOURCE: Beijing ZHONGHUA SHENJING-JINGSHENKE ZAZHI [CHINESE JOURNAL OF NEUROLOGY AND PSYCHIATRY] in Chinese No 1, 5 Mar 79 pp 41-44

ABSTRACT: Acoustic neurinoma is a common intracranial benign tumor, with an incidence of 7.3 - 10 percent among all intracranial tumors. Its prognosis depends mainly upon the characteristic of the particular tumor and the level of the surgical technique. Due to its special location, the surgical mortality rate is high, about 19 to 40 percent. From 1967 to 1977, the department operated on 30 such cases; there were two deaths in the group. The clinical data, the clinical diagnosis, and the surgical procedure are reported.



AUTHOR: BAO Yaodong [7637 5069 2639]  
LIN Mugen [2651 2606 2704]

ORG: Both of Department of Neurosurgery, First Hospital, Suzhou College of Medicine

TITLE: "Intraspinal Extradural Abscess"

SOURCE: Beijing ZHONGHUA SHENJING-JINGSHENKE ZAZHI [CHINESE JOURNAL OF NEUROLOGY AND PSYCHIATRY] in Chinese No 1, 5 Mar 79 pp 45-48

ABSTRACT: Intraspinal extradural abscess often begins as a pain in the lumbar region and develops quickly as a pressure on the spinal cord. If it is not timely and effectively treated, paraplegic after effects often occur. Diagnosis of this disease is often delayed due to insufficient understanding of the physician as well as the speed of development of the disease itself. From May 1958 to March 1978, the hospital treated a total of 69 such cases, with diagnoses verified by postoperative pathological reports. Two of the group died during surgery, and six of the remaining died after being discharged from the hospital. The clinical data of the group are analyzed.

AUTHOR: XUE Qingcheng [5641 1987 3397]

ORG: Department of Brain System, Tianjin College of Medicine Hospital

TITLE: "Pituitary Tumor Associated With Cushing's Syndrome"

SOURCE: Beijing ZHONGHUA SHENJING-JINGSHENKE ZAZHI [CHINESE JOURNAL OF NEUROLOGY AND PSYCHIATRY] in Chinese No 1, 5 Mar 79 pp 49-52

ABSTRACT: When Cushing first described Cushing's syndrome in 1932, he believed that the disease is primarily caused by a pituitary basophilic adenoma. Since then, the understandings of this disease have progressed and its clinical manifestations indicate that it is caused directly by excessive secretion of adrenocortical hormone and prolonged use of the hormone can produce this disease. Some authors have tried to distinguish Cushing's syndrome from Cushing's disease, the latter being caused by adrenal hyperplasia induced by a pituitary tumor. Based upon the clinical data of 110 cases treated at the hospital, the author discusses the four different pathogenetic conditions of this ACTH disease. Case histories of two of the group, for whom resection of pituitary tumor was performed, are given as typical cases of discovery of pituitary tumor after adrenalectomy.

AUTHOR: JIA Baoxiang [6328 0202 4382]

ORG: Department of Neurosurgery, Beijing Friendship Hospital

TITLE: "A Simple Hemostatic Method in Making Scalp Incisions--Uninterrupted Locked Sutures in Segmental Circles"

SOURCE: Beijing ZHONGHUA SHENJING-JINGSHENKE ZAZHI [CHINESE JOURNAL OF NEUROLOGY AND PSYCHIATRY] in Chinese No 1, 5 Mar 79 pp 53-54

ABSTRACT: The scalp has a rich supply of blood; therefore, hemorrhage is often excessive in intracranial surgery. The department has carried out a search, intermittently since 1968, for a simple and effective hemostatic technique for making scalp incisions. This paper introduces one method that is relatively simple, and that has been applied by the author and colleagues intermittently for 68 cases of cranial surgeries. The clinical data and the work procedure are given.

AUTHOR: JIANG Zuoning [1203 0146 1380]

ORG: Beijing Anding Hospital

TITLE: "Several Problems in the Application of Antipsychotic Drugs"

SOURCE: Beijing ZHONGHUA SHENJING-JINGSHENKE ZAZHI [CHINESE JOURNAL OF NEUROLOGY AND PSYCHIATRY] in Chinese No 1, 5 Mar 79 pp 58-61

ABSTRACT: Clinical application of antipsychotic drugs has had a history of more than two decades. Since these drugs became available, the treatment procedure and the management of the psychiatric department have been changed and they also have improved men's understanding of mental diseases. In China some antipsychotic drugs manufactured domestically have reached the very basic level and improper application and abuse have continuously appeared. The common problems in the application of this type of drugs in recent years have included the realm of symptoms for which they are suitable, their effective dosage, their complex side effects, serious complications including sudden death, the problem of mixed use of more than one drug, and the reasonable use of anticholinergic and antiparkinsonian agents with the antipsychotic drugs. These problems are discussed in the paper in separate sections.

AUTHOR: LI Xintian [2621 1800 1131]  
GUO Nianfeng [6751 1819 6912]

ORG: Both of Institute of Psychology, Chinese Academy of Sciences

TITLE: "Origin and Current Condition of Clinical Neuropsychology--  
Introducing a Branch Science Among Neurological Sciences"

SOURCE: Beijing ZHONGHUA SHENJING-JINGSHENKE ZAZHI [CHINESE JOURNAL OF  
NEUROLOGY AND PSYCHIATRY] in Chinese No 1, 5 Mar 79 pp 55-58

ABSTRACT: Neuropsychology includes the three parts of clinical neuropsychology, experimental neuropsychology, and behavior neurology. Clinical neuropsychology studies the functional impairment of the superior nervous system of brain damaged patients, to provide objective basis for diagnosis, identification, and prognosis. It has opened a new pathway for treatment of these diseases. It is, therefore, closely related with clinology, neurology, and psychiatry, and in theory, it provides important data for explaining the relationship between the human psyche and the cerebrum. The history of development of this science is briefly told.

AUTHOR: WANG Yinxian [3769 1377 4161]

ORG: Department of Neurology, Kirin Provincial Yanbian Hospital

TITLE: "Report of Two Cases of Wallenberg Syndrome"

SOURCE: Beijing ZHONGHUA SHENJING-JINGSHENKE ZAZHI [CHINESE JOURNAL OF NEUROLOGY AND PSYCHIATRY] in Chinese No 1, 5 Mar 79 p 61

ABSTRACT: This paper reports two cases of respiratory crisis due to paralysis of the X pair of cranial nerves leading to the accumulation of phlegm in the trachea. Both were saved by emergency tracheotomy. The case histories are given.

6168

CSO: 4009

## MEDICINE

AUTHOR: XIA Zhenyi [1115 6966 1138]  
YAN Shanming [0917 6365 2494]

ORG: XIA of Psychiatry Teaching and Research Group Shanghai First College of Medicine and Shanghai Municipal Center for Prevention and Treatment of Psychopathy; YAN of Zhenjiang Center for Prevention and Treatment of Psychopathy, Jiangsu Province

TITLE: "Some Problems in Clinical Psychiatric Research"

SOURCE: Beijing ZHONGHUA SHENJING-JINGSHENKE ZAZHI [CHINESE JOURNAL OF NEUROLOGY AND PSYCHIATRY] in Chinese No 2, 5 Dec 78 pp 65-68

ABSTRACT: The purpose of all research studies in psychiatry is to serve the prevention and treatment of psychiatric diseases. Genetic, biochemical, and pharmacological studies are to support clinology. Although the value of experimental research cannot be denied, it cannot replace clinical research outside of the laboratory. In China, clinical research remains a great distance behind the advanced level of the world. The textbooks reflect the diagnostic principles traditionally adopted in China and are not based upon a large quantity of domestic data. The concept of schizophrenia is vague because of deficient clinical research. The concept of other psychiatric diseases, such as schizoaffective disease, is also not very clear because it is based upon the data of 6-7 countries. These and other problems are discussed in general terms in the paper.

AUTHOR: ZHANG Shusheng [1728 2885 3932]

ORG: Department of Neurology, Nantong College of Medicine Hospital

TITLE: "Understandings of a Case of Successful Rescue From Respiratory Arrest for 16 Days Due to Acute Infectious Polyneuritis By Integrated Chinese Traditional and Western Medicine"

SOURCE: Beijing ZHONGHUA SHENJING-JINGSHENKE ZAZHI [CHINESE JOURNAL OF NEUROLOGY AND PSYCHIATRY] in Chinese No 2, 5 Dec 78 p 68

ABSTRACT: This paper reports the case of a 31 year old female commune member, diagnosed of infectious polyneuritis and treated with hormone. She was discharged after her condition was better and the hormone treatment was discontinued. Two weeks later, symptoms of loss of muscular tension, slurred speech, inability to close eyes, etc. recurred. She was hospitalized for the second time, and a few hours after she was readmitted, her breathing grew weaker and she soon stopped breathing altogether. Following tracheotomy, she was placed on a simple respirator for 16 days and fed Chinese traditional medicine in a tube, before voluntary breathing was restored. Ingredients of the traditional decoction are described.



AUTHOR: CHEN Xinkang [7115 0207 1660]

ORG: Department of Neurosurgery, Wuhan Municipal Second Hospital

TITLE: "Treatment of Spasmodic Torticollis by Resection of Splenius Capitis Muscle and Accessory Nerve"

SOURCE: Beijing ZHONGHUA SHENJING-JINGSHENKE ZAZHI [CHINESE JOURNAL OF NEUROLOGY AND PSYCHIATRY] in Chinese No 2, 5 Dec 78 pp 69-71

ABSTRACT: From April 1969 to April 1978, the department performed resection of splenius capitis muscle and accessory nerve for 8 men and 2 women, aged 20-51, suffering from torticollis from 6 months to 9 years. In one case, the disease started after a high fever. For the remaining, the disease was insidious and the cause was difficult to determine. Of the group, eight were completely cured, and two improved. Case histories of two of these are given. The paper includes a description of the surgical procedure.

AUTHOR: XUE Qingcheng [5641 1987 3397]  
WANG Minglu [3769 2494]

ORG: Both of Department of Brain System, Tianjin College of Medicine Hospital

TITLE: "Observations on the Clinical Manifestations of Cerebro-vascular Malformations and Their Response to Treatment"

SOURCE: Beijing ZHONGHUA SHENJING-JINGSHENKE ZAZHI [CHINESE JOURNAL OF NEUROLOGY AND PSYCHIATRY] in Chinese No 2, 5 Dec 78 pp 72-75

ABSTRACT: Among the patients of cerebro-vascular malformations treated at the department from July 1952 to March 1978, the records of 115 cases are preserved. The clinical data of the 115 cases are analyzed and reported.

AUTHOR: DUAN Guosheng [3008 0948 0581]  
LIU Bingcun [0491 3521 1317]  
ZHANG Ji [1728 4764]

ORG: All of Department of Brain Surgery, Chinese People's Liberation Army General Hospital

TITLE: "Reassessment of Surgical Treatment for Parasagittal Falx Meningioma in Precentral Gyrus"

SOURCE: Beijing ZHONGHUA SHENJING-JINGSHENKE ZAZHI [CHINESE JOURNAL OF NEUROLOGY AND PSYCHIATRY] in Chinese No 2, 5 Dec 78 pp 76-78

ABSTRACT: There is a rich accumulation of experience here and in foreign countries in surgical treatment of parasagittal and falx meningioma; the cure rate has been improved and the mortality rate has been gradually reduced, but in cases of tumor of the precentral gyrus, the rate of postoperative hemiplegia remains very high. From October 1969 to December 1977, the hospital operated on 24 such cases involving the precentral gyrus region. The total resection of tumor technique was adopted for the 9 cases treated before November 1972, and the incidence of hemiplegia was high. Since then, the Rolandic vein technique has been adopted to preserve the central veins and postoperative hemiplegia was avoided. This paper introduces the clinical data of the group and discusses the importance of the improved technique.

AUTHOR: CHANG Zhi [1603 3112]  
DU Rongshan [2659 2837 0005]  
ZHAO Boli [6392 0990 3810]

ORG: CHANG of Beijing Municipal Fengtai District Hospital; DU of Beijing Anding Hospital; ZHAO of Daxing County Hospital, Beijing

TITLE: "Damage to Cardiovascular System by Chlorpromazine: Report of 11 Cases "

SOURCE: Beijing ZHONGHUA SHENJING-JINGSHENKE ZAZHI [CHINESE JOURNAL OF NEUROLOGY AND PSYCHIATRY] in Chinese No 2, 5 Dec 78 p 78

ABSTRACT: Chlorpromazine is extensively applied and its toxic reactions are relatively common. Its damage to the cardiovascular system often occurs suddenly and death may occur within a short time. It is, therefore, necessary for clinical physicians to understand its toxic action to the cardiovascular system. A brief report of the clinical data of 11 such cases are included; four of the group died suddenly. Perhaps preexisting cardiac disorder causes some patients to be unable to withstand further damage by the drug. Mannitol, which can increase the flow volume of the coronary artery, is suggested as good for treating the drug reaction.

AUTHOR: YU Qinghan [0060 3237 3352]  
WANG Jiahua [3769 1367 5478]

ORG: Both of Neurology and Psychiatry Teaching and Research Office, First Hospital, Fourth Military University of Medicine, Chinese People's Liberation Army

TITLE: "Mental Disorders Accompanying Some Endocrine Diseases"

SOURCE: Beijing ZHONGHUA SHENJING-JINGSHENKE ZAZHI [CHINESE JOURNAL OF NEUROLOGY AND PSYCHIATRY] in Chinese No 2, 5 Dec 78 pp 79-82

ABSTRACT: From 1958 to 1973, the author and colleagues of the office observed 306 patients of endocrine disorders and discovered that 122 of them also suffered from psychotic disorders, amounting to 39.9 percent. Incidence of mental disorders in the six types of endocrine diseases, including hyperthyroidism, hypothyroidism, acromegaly, Scheehan's syndrome, Cushing's syndrome, and Addison's disease, of the group is reported. The psychotic symptoms are described. The paper also discusses briefly the pathogenesis, the mechanism, and the prevention and treatment measures for such mental disorders.

AUTHOR: YU Yanwen [0060 1750 2429]  
JIANG Yufang [1203 3768 5364]  
ZHANG Hu [1728 3275]

ORG: All of Harbin Municipal First Specialty Hospital

TITLE: "Finger Nail Pressure Mark on Ear" and Mental Diseases"

SOURCE: Beijing ZHONGHUA SHENJING-JINGSHENKE ZAZHI [CHINESE JOURNAL OF NEUROLOGY AND PSYCHIATRY] in Chinese No 2, 5 Dec 78 p 82

ABSTRACT: The authors discovered a mark or marks on the backside of one ear or both ears, shaped like an indentation caused by pressing the area with a finger nail. There may be only one mark and there may be several marks. This phenomenon is observed more frequently on patients of mental diseases and only occasionally on normal persons. Among 1280 mental patients examined, there were 32 patients with this phenomenon. Among the 956 normal persons examined, only 5 persons were observed to have this phenomenon, ( $P < 0.01$ ). The appearance of the phenomenon is five times more frequent among mental patients than normal persons, and among mental patients, there is a concentration among those of schizophrenia, especially hebephrenic schizophrenia.

AUTHOR: None

ORG: Beijing Municipal Anding Hospital

TITLE: "Clinical Effect of Pimozide in Schizophrenia"

SOURCE: Beijing ZHONGHUA SHENJING-JINGSHENKE ZAZHI [CHINESE JOURNAL OF NEUROLOGY AND PSYCHIATRY] in Chinese No 2, 5 Dec 78 pp 83-85

ABSTRACT: Pimozide is a diphenylbutylpiperide type drug and has a long lasting effect. One ingestion a day produces 24-hour action. This paper reports its application in 66 cases of schizophrenia in 1977 and compares it with the effects of fluphenazine and haloperidol. In the opinion of the authors, judging from their overall actions, when the drug is used either for treatment or for maintenance, pimozide compares less favorably than haloperidol.

AUTHOR: None

ORG: Cooperative Research Group, Jiangsu Provincial Department of Prevention and Treatment of Mental Diseases

TITLE: "Clinical Analysis of 352 Cases of Schizophrenia Treated by Flos Daturae Combined With Small Doses of Tranquillizers"

SOURCE: Beijing ZHONGHUA SHENJING-JINGSHENKE ZAZHI [CHINESE JOURNAL OF NEUROLOGY AND PSYCHIATRY] in Chinese No 2, 5 Dec 78 pp 86-89

ABSTRACT: At the 1976 Jiangsu Provincial Department of Prevention and Treatment of Mental Diseases Research Conference, there were eight papers on treatment with flos daturae. The data concern several groups of patients, totaling 352 cases. The age of patients varied from 15 to 50; most of them 15-30. The flos daturae drug used was a product of Changshou Jungong Pharmaceutical Plant, containing 1 mg of hyoscine per ml of the drug. The drug was either applied as a muscular injection, 15-20 minutes after ingesting chlorpromazine, or mixed with chlorpromazine for muscular injection with 20 mg of benadryl added to prevent formation of abscess. The clinical and laboratory observations and the short term treatment effects reported in the papers are summarized and analyzed.



AUTHOR: HU Junde [5170 0193 1795]

ORG: Neurology Group, Department of Internal Medicine, First Hospital, Wuhan College of Medicine

TITLE: "Report of One Case of Drug Induced Acute Meningitis"

SOURCE: Beijing ZHONGHUA SHENJING-JINGSHENKE ZAZHI [CHINESE JOURNAL OF NEUROLOGY AND PSYCHIATRY] in Chinese No 2, 5 Dec 78 p 89

ABSTRACT: The 26 year old male worker was treated for "losing his hair," in the outpatient clinic with an injection of Angelica sinensis (Oliv.) Diels extract (6 ml of 20 percent injection solution) in the acupuncture point of Fengchi, which is located between the collar bone and the first cervical vertebra. According the author, the needle went too deep (about 4 cm). About 15 minutes afterwards, the patient complained of violent headache, with nausea, and vomited five times. His limbs were numb and he developed a fever about one hour later. He was diagnosed to be acute drug induced meningitis, and treated with antibiotics. He recovered four days afterwards. Laboratory analysis of his cerebrospinal fluid is reported in the paper.

AUTHOR: CHEN Baojian [7115 0202 0256]

ORG: Department of Neurology, Xuzhou College of Medicine Hospital

TITLE: "Side-effects of Small Doses of Phenothiazines on the Extrapyrmidal System and the Efficacy of Anisodamine"

SOURCE: Beijing ZHONGHUA SHENJING-JINGSHENKE ZAZHI [CHINESE JOURNAL OF NEUROLOGY AND PSYCHIATRY] in Chinese No 2, 5 Dec 78 pp 90-91

ABSTRACT: In the past, attention was given to the side-effects of large doses of phenothiazines on the extrapyramidal system. Since a reduction to small dosage was generally adopted, such side-effects have been easily ignored and mistaken diagnosis has often occurred. From February to October 1977, the author encountered, in the outpatient clinic, 40 cases of such side-effects from ingestion of small doses of either phenazine or chlorpromazine. These cases are analysed and reported. Treatment effects of anisodamine on these cases are assessed.



AUTHOR: LIU Ximin [0491 6932 3046]  
YU Burun [0060 2975 3387]  
ZHOU Qingqing [0719 3237 2494]

ORG: All of Department of Neurology, Wuhan College of Medicine Second Hospital

TITLE: "An Analysis of 100 Cases of Cerebroangiography of Cerebroarteritis Caused by leptospira"

SOURCE: Beijing ZHONGHUA SHENJING-JINGSHENKE ZAZHI [CHINESE JOURNAL OF NEUROLOGY AND PSYCHIATRY] in Chinese No 2, 5 Dec 78 pp 92-94

ABSTRACT: Research on the cerebroangiographic changes of leptospira is, at present, a new subject both here and abroad. This paper reports the cerebroangiographic studies of one hundred cases, out of the 652 cases of leptospira treated by the department from 1958 to 1978. The cerebroangiographic signs are analyzed in combination with the clinical data. Photo-illustrations are included.

AUTHOR: YU Guiling [0151 2710 3237]

ORG: Department of Internal Medicine, Bangbu Municipal Third People's Hospital

TITLE: "Summary of 100 Cases of Hemiplegia Treated With Integrated Chinese Traditional and Western Medicine"

SOURCE: Cases of hemiplegia with brain hemorrhage and thrombosis were selected for treatment with integrated Chinese traditional and Western medicine. One hundred such cases whose records are relatively complete are analyzed and reported. The group includes 59 men and 41 women, aged 50-70 mostly. Conditions of recovery of muscular function after treated are listed in a table. For most of the cases, the observation lasted 1-3 months; but ten of these cases were observed for 6-12 months. Chinese traditional drugs used in the treatment formula are described. Intravenous drip of mannitol was employed to reduce intracranial pressure. In some cases, supermonic wave and acupuncture were also adopted as a part of the treatment.

AUTHOR: ZHAO Baoxun [6392 5508 3169]  
HUANG Huifen [7806 5610 5358]  
YANG Yinchang [2799 5593 2490]  
LIU Xiuqin [0491 4423 3830]

ORG: All of Department of Neurology, Capitol Hospital, Chinese Academy of Medicine

TITLE: "Clinical Analysis of 156 Cases of Acute Polyradiculoneuritis"

SOURCE: Beijing ZHONGHUA SHENJING-JINGSHENKE ZAZHI [CHINESE JOURNAL OF NEUROLOGY AND PSYCHIATRY] in Chinese No 2, 5 Dec 78 pp 95-100

ABSTRACT: In China, acute polyradiculoneuritis is a relatively common neurological disease and the incidence is obviously on the rise in recent years. This is especially so in the rural villages; there is also a tendency of epidemic occurrences. From 1949 to 1975, the hospital treated a total of 156 cases. Pathological data are available for three of the group. Its epidemic characteristics include the fact that 75.6 percent of the group are below 30 years of age, and the highest rate of incidence belongs to students and farmers. Among the patients of the rural areas, they have a tendency of concentrating in one region; this tendency has been reported from other places of the country as well. Clinical data, recovery process, and treatment procedure are analyzed.

AUTHOR: KUAN Feigen [0562 1014 2704]  
SONG Xueyi [1345 7185 1837]  
WU Aihua [0702 1947 5478]  
ZHANG Fengying [1728 7364 5391]

ORG: All of Neurological Medium Laboratory, Chinese People's Liberation Army General Hospital

TITLE: "Effect of Electroacupuncture on the Acetylcholine Content of the Fluid Perfused From the Muscle at the Acupuncture Point"

SOURCE: Beijing ZHONGHUA SHENJING-JINGSHENKE ZAZHI [CHINESE JOURNAL OF NEUROLOGY AND PSYCHIATRY] in Chinese No 2, 5 Dec 78 pp 101-103

ABSTRACT: In the process of applying the technique of five point suitable stimulation (Department of New Medicine, Chinese People's Liberation Army General Hospital; Summary of 696 Cases of Neurological Motion Disturbance Treated with Integrated Chinese Traditional and Western Acupuncture Points and Motion Points Suitable Stimulation Technique, 1975, unpublished material) the authors have observed that in some patients various degrees of improvement occur during the first acupuncture treatment. For example, a paraplegic was suddenly able to take a few steps by himself. For the purpose of studying the mechanism of the effects, experiments were conducted, to search for the material basis, with large white rats. The acetylcholine content of the fluid perfused from the muscle at the electroacupuncture points was determined. The method and results are reported.

AUTHOR: ZHANG Lisheng [1728 4350 3932]

ORG: Department of Internal Medicine, Yingkou Municipal Chinese Traditional Hospital

TITLE: "The Relation Between Gastric Movement and Psychic Factors in Neurasthenics"

SOURCE: Beijing ZHONGHUA SHENJING-JINGSHENKE ZAZHI [CHINESE JOURNAL OF NEUROLOGY AND PSYCHIATRY] in Chinese No 2, 5 Dec 78 pp 104-106

ABSTRACT: There have been domestic and foreign reports of changes in the cardiovascular system, respiration, electroencephalogram, conditioned reflex, skin temperature, gall bladder movement, and endocrine system in neurasthenic patients. Some have even discovered changes in the movement of the gastrointestinal tract and blood flow of the gastric wall. Clinically, complaints of many many types of digestive symptoms are also regularly heard from neurasthenics. For the purpose of understanding the state of their gastric function, a study was made to record the gastric movement wave of neurasthenics with no other concurrent diseases to observe the influence of psychic factors on diseases and to search for the pathological and physiological bases of mental factors. Effects of the three drugs of adrenalin, pilocarpin, and atropine on the function of vegetative nerves of these patients are also observed for further analysis of the characteristics of the gastric movement wave to determine the relationship between the two.

AUTHOR: QU Zhiping [4234 3112 1627]  
ZHU Wen-bing [2612 2429 3521]  
YU Liyun [0205 7787 0061]  
CHEN Hanbai [7115 3352 4101]  
ZHANG Yuanchang [1728 3104 2490]

ORG: All of Neuropathy Research Office, Department of Neurology, Huashan Hospital, Shanghai First College of Medicine

TITLE: "Report of One Case of Epilepsy Induced by Closing Eyes"

SOURCE: Beijing ZHONGHUA SHENJING-JINGSHENKE ZAZHI [CHINESE JOURNAL OF NEUROLOGY AND PSYCHIATRY] in Chinese No 2, 5 Dec 78 pp 107-108

ABSTRACT: This paper reports a 24 year old male patient. For three years previously, everytime he closes his eyes, his eyelids and his entire body will begin to shake. The condition has become more severe of late. The attacks have become more frequent, from once a year to every half a year, to several times a night. Sometimes, an attack occurs while he is asleep and sometimes the attack is accompanied by enuresis. Various drugs have been administered including ospolot, Chinese traditional drugs, etc. but none can control the attacks. Depakine appears to be more effective for him. Its effect is being observed at present. Electroencephograms during the time his eyes are open and the time when his eyes are closed are included in this report.

AUTHOR: WENG Deli [5040 1795 4539]

ORG: Department of Internal Medicine, Shanghai 35th Cotton Textile Mill Hospital

TITLE: "Diagnosis and Management of Intracranial Hypertonia"

SOURCE: Beijing ZHONGHUA SHENJING-JINGSHENKE ZAZHI [CHINESE JOURNAL OF NEUROLOGY AND PSYCHIATRY] in Chinese No 2, 5 Dec 78 pp 109-112

ABSTRACT: Intracranial pressure is formed by static pressure factors of the brain vessels, brain tissues, and cerebrospinal fluid. The ratio of solids in the skull is very small and remains basically stable, but the fluid elements change a great deal in the process of certain diseases and the change has an obvious effect on the intracranial pressure. There is a certain space (about 10 percent in adults) in the cranial cavity to compensate for expansion, but if the brain tissues increase in volume beyond this limit, the person's life is in danger. In the form of a lecture, this paper explains the pathogenesis, the pathology, the diagnosis of intracranial hypertonia, and available measures to reduce the intracranial pressure.

AUTHOR: TAN Mingxun [6223 6900 8113]

ORG: Department of Neurology, Capitol Hospital, Chinese Academy of Medicine

TITLE: "Carcinomatous Non-metastatic Neurological Diseases"

SOURCE: Beijing ZHONGHUA SHENJING-JINGSHENKE ZAZHI [CHINESE JOURNAL OF NEUROLOGY AND PSYCHIATRY] in Chinese No 2, 5 Dec 78 pp 113-115

ABSTRACT: This paper is a comprehensive discussion of non-metastatic effects of cancer on the nervous system. The discussion is divided into sections on carcinomatous brain diseases, carcinomatous diseases of the spinal cord, carcinomatous diseases of the peripheral nerves, and carcinomatous diseases of the muscles.



AUTHOR: HAN Jisheng [7281 3444 3932]

ORG: Physiology Teaching and Research Group, Beijing College of Medicine

TITLE: "Probenecid Test--One Type of Method to Determine the Renewal Rate of Human Brain Monoamine Neural Media"

SOURCE: Beijing ZHONGHUA SENJING-JINGSHENKE ZAZHI [CHINESE JOURNAL OF NEUROLOGY AND PSYCHIATRY] in Chinese No 2, 5 Dec 78 pp 116-120

ABSTRACT: The pathogenesis of certain diseases has been discovered, in recent years, to be related to a metabolic disturbance of monoamine neural media in the brain. For example, paralysis agitans is related to metabolism of DA and manic-depressive psychosis to that of 5-HT and NE in the brain. At present, ways are being sought to concretely determine the renewal rate of these substances in the human brain for the purpose of opening a new pathway of diagnosis and treatment of these diseases of neurology and internal medicine. At present the probenecid test is one of the relatively more effective techniques being applied. Monoamines of cerebrospinal fluid and their metabolic products, the meaning of the probenecid test, the procedure of the test, and several related problems are discussed.

AUTHOR: JIA Zuoting [6328 0146 1694]

ORG: Department of Neurology, First Hospital, Fourth Military University of Medicine

TITLE: "Report of One Cases of Cerebral Metastasis of Alveolar Soft-part Sarcoma"

SOURCE: Beijing ZHONGHUA SENJING-JINGSHENKE ZAZHI [CHINESE JOURNAL OF NEUROLOGY AND PSYCHIATRY] in Chinese No 2, 5 Dec 78 p 120

ABSTRACT: Alveolar soft-part sarcoma is a relatively rare malignancy and its cerebral metastasis is also not frequently observed. This paper reports the case of a 31 year old female commune member who had had a large sarcoma removed from her hip in 1972. There had been no recurrence until early in 1977 when symptoms of headache, nausea, and vomiting appeared. By August 1977 these symptoms became so severe that she could neither eat nor get out of bed. Surgery removed a tumor from the right frontal lobe of her brain. Pathological diagnosis was metastatic alveolar soft part sarcoma. The patient was discharged 15 days later, capable of eating, speaking, and walking, with very mild paralysis of the left limbs.



AUTHOR: YU Guoxiong [3266 0948 7160]  
WANG Zhejin [3769 5074 2516]

ORG: Both of Department of Neuro-internal Medicine, Second Hospital, Fourth Military University of Medicine

TITLE: " Six Cases of Cervical Migraine"

SOURCE: Beijing ZHONGHUA SHENJING-JINGSHENKE ZAZHI [CHINESE JOURNAL OF NEUROLOGY AND PSYCHIATRY] in Chinese No 2, 5 Dec 78 p 126

ABSTRACT: Disease of the cervical vertebra may cause visual, labyrinthine, and limb symptoms. Injury to the skull and the neck, even without bone damage can cause cerebral-cervical syndrome and cervical migraine headache. Case histories of six such patients are reported. One of these was not treated because of concurrent heart disease. For the remaining five cases, neck brace, muscular injection of vitamin B<sub>1</sub>, B<sub>12</sub>, enclosure of cervical nerve, and ingestion of nicotinic acid, and Chinese traditional blood activating and congestion dissolving drugs cured three, improved two, and had no effect on one.

AUTHOR: None

ORG: None

TITLE: "Prevention and Treatment Formula: Classification of Acute Cerebrovascular Diseases"(Experimental Draft)"

SOURCE: Beijing ZHONGHUA SHENJING-JINGSHENKE ZAZHI [CHINESE JOURNAL OF NEUROLOGY AND PSYCHIATRY] in Chinese No 2, 5 Dec 78 pp 127-128

ABSTRACT: Cerebrovascular diseases are divided into the five major types of (1) ischemic cerebrovascular diseases; (2) hemorrhagic cerebrovascular diseases; (3) hypertensive brain diseases; (4) intracranial venous thrombosis; (5) others. Each major category is further divided into various subtypes. Diagnostic standards for each of the subtypes are given as an appendix in this document.

AUTHOR: None

ORG: None

TITLE: "Diagnostic Standard for Cerebral Arteriosclerosis (Experimental Draft)"

SOURCE: Beijing ZHONGHUA SHENJING-JINGSHENKE ZAZHI [CHINESE JOURNAL OF NEUROLOGY AND PSYCHIATRY] in Chinese No 2, 5 Dec 78 p 128

ABSTRACT: This document lists five minimum standards for the diagnosis of cerebral arteriosclerosis: (1) The patient is over 45 years of age; (2) First occurrence of unstable superior nervous activity symptom and/or symptoms of diffuse damage of the brain; (3) Signs of general arteriosclerosis of the entire body; (4) Symptoms of the nervous system; (5) Serum hypercholesterolemia; (6) Exclusion of all other diseases.

AUTHOR: None

ORG: None

TITLE: "Intra-extracranial Arterial Anastomosis for the Treatment of Closed Cerebrovascular Diseases: Suitable Symptoms and Evaluation of Effects' (Experimental Draft)"

SOURCE: Beijing ZHONGHUA SHENJING-JINGSHENKE ZAZHI [CHINESE JOURNAL OF NEUROLOGY AND PSYCHIATRY] in Chinese No 2, 5 Dec 78 p 128

ABSTRACT: The treatment technique is suitable if: (1) There are more than two transient ischemic attacks (TIA) within 6 months; (2) Complete or incomplete infarction of the cervical artery system--recovery time: 3 weeks to half a year; (3) Spinal cord symptoms persist for more than 3 weeks. (4) There should also be cerebroangiographic verification of stenosis or obstruction. The technique should not be applied if hemorrhage cannot be excluded. Standards for evaluation of the treatment effect when this technique is employed are described.

AUTHOR: None

ORG: None

TITLE: "Stages of Hypertensive Cerebral Hemorrhage and Signs Indicating Suitability for Surgery (Experimental Drafe)"

SOURCE: Beijing ZHONGHUA SHENJING-JINGSHENKE ZAZHI [CHINESE JOURNAL OF NEUROLOGY AND PSYCHIATRY] in Chinese No 2, 5 Dec 78 p 128

ABSTRACT: The purpose of surgery in hypertensive cerebral hemorrhage is to remove hematoma, relieve pressure on the brain, save the patient's life, and try to restore nervous functions. Effects of surgery vary a great deal with the method of selecting suitable cases. For the purpose of facilitating selection, this disease is divided into 3 stages. Symptoms indicating first or second stage hypertensive cerebral hemorrhage are described, and all of these should be operated as soon as possible except for those who are either of advanced age or of obvious disorders of the heart, lung, liver, or kidney. Surgery should be performed on these only with extreme caution. Surgery is not suitable for patients of the third stage, the symptoms of which are also described.

AUTHOR: None

ORG: None

TITLE: "Classification of Skull and Brain Injuries and Opinions Concerning Mortality Statistics"

SOURCE: Beijing ZHONGHUA SHENJING-JINGSHENKE ZAZHI [CHINESE JOURNAL OF NEUROLOGY AND PSYCHIATRY] in Chinese No 2, 5 Dec 78 ppl28, 112

ABSTRACT: The delegates of the Neurosurgery Group of the Second Neurology and Psychiatry Conference of Chinese Medical Society discussed the classification method of dividing skull and brain injuries into the mild, the intermediate, and the severe which had been formulated on the Zhengzhou Conference of the Surgical Society in 1960. The delegates agreed that after 18 years of application, the formula had been proved to be basically suitable. Its shortcoming is the fact that the condition of injury of the severe and the intermediate varies a great deal and there is no clear definition of the open wound. Revisions are suggested to overcome the shortcomings. The method of computing the mortality rate of skull and brain injuries is given.

6168

CSO: 4009

## MEDICINE

**AUTHOR:** None

**ORG:** Yunnan Simao Anti-epidemic Station and Yunnan Provincial Malaria Control Clinic

**TITLE:** "Experience of Simao's Fundamental Elimination of Malaria"

**SOURCE:** Beijing ZHONGHUA YUFANG YIXUE ZAZHI [Chinese Journal of Preventive Medicine] Vol 13 No 1, 25 Feb 79 pp 1-3

**ABSTRACT:** This article summarizes and analyzes the experience of how the Simao District of Yunnan province, fundamentally eliminates malaria that had seriously infested the area since 1919, and reduced the population from 35,000 to 1,092 persons. The measures enforced from 1953 to 1958 included: 1) repeated spraying of wettable "666" powder to all houses and pens; 2) ditch and swamp modification, weeding and ground flattening; 3) medical treatment according to annual mass survey and blood tests; and 4) timely administration of prophylactic medicine. By 1958, the malaria incidence among the population had reduced to 3.7 per ten thousand. The results were further consolidated by the adoption of a series of measures which are also introduced.

**AUTHORS:** SHEN Fangzheng [3088 2455 2973]  
ZHAO Guifang [6392 2710 5364]  
XU Xiaolian [1776 1420 5571]

**ORG:** All of Shanghai Epidemic Control Station

**TITLE:** "Influenza Surveillance and Its Prediction"

**SOURCE:** Beijing ZHONGHUA YUFANG YIXUE ZAZHI [Chinese Journal of Preventive Medicine] Vol 13 No 1, 25 Feb 79 pp 4-7

**ABSTRACT:** Introducing the surveillance and prediction on the February influenza epidemic in 1977-1978 by the Shanghai Epidemic Control Station, it is confirmed from virus isolation, antigen analysis and serum tests that: 1) when the cases of weekly high fever, respiratory tract infectious disease surpasses the peak of weekly incidence critical curve, B type antigen and influenza belonging to the 1975 A<sub>3</sub> type will not be as prevalent; 2) sporadic appearance of 1977 A<sub>3</sub> type varieties few months ahead has enabled prediction of its epidemic peak, and timely adoption of preventive measures; and 3) A<sub>1</sub> type influenza is mainly limited to youths and children.

Dr. Li Bingquan [2621 4426 2938], Cabel District Epidemic Control Station, Xuhui District Central Hospital and Beishan Hospital joined the observation.



AUTHOR: None

ORG: Department of Environmental Health, Institute of Hygiene, Chinese Academy of Medical Sciences

TITLE: "Studies on the Teratogenesis of Sodium Pentachlorophenol in Rats"

SOURCE: Beijing ZHONGHUA YUFANG YIXUE ZAZHI [Chinese Journal of Preventive Medicine] Vol 13 No 1, 25 Feb 79 pp 8-10

ABSTRACT: Further study on the teratogenic effect of Na-PCP (sodium pentachlorophenol) on rats confirms that: 1) the drug can induce bone malformation, exencephaly, umbilical hernia and double cleft of the upper lip; 2) its fetotoxicity seems to result mainly in abortion, early stage embryo absorption and dead embryo, poor embryo growth, and malformation; and 3) the teratogenic dose above 30 mg/kg, and nonteratogenic dose is below 10 mg/kg.

AUTHORS: CHEN Lili [7115 4539 4409]  
YANG Tianzhi [2799 1131 5347]  
YIN Dachang [3009 1129 1603]

ORG: All of Virus Laboratory, Sichuan Provincial Epidemic Control Station

TITLE: "Studies on the Biological Characteristics of the New Type A<sub>1</sub> Influenza Virus"

SOURCE: Beijing ZHONGHUA YUFANG YIXUE ZAZHI [Chinese Journal of Preventive Medicine] Vol 13 no 1, 25 Feb 79 pp 11-14

ABSTRACT: A comparative study on the biological characteristics of the new type A<sub>1</sub> influenza virus against other influenza viruses shows that: its antigenicity is slightly different from the FM<sub>1</sub> virus, distinctly different from the Jing 56-1 virus, but almost similar to the old type A<sub>1</sub> virus of 20 years ago; 2) its range of blood cell agglutination coincides with the old type A<sub>1</sub> virus; 3) its free mobility of virus autoblood cell surface is similar to that of the old type A<sub>1</sub> virus, but definitely different from that of the type "O" human blood cell; and 4) its sensitivity and stability of virus agglutinin to heat is higher than either the old type A<sub>1</sub>, the Jing 56-1 or FM<sub>1</sub> viruses. Since the type A<sub>1</sub> virus can infect such animals as pigs, etc., it is assumed that the type A<sub>1</sub> virus might in the past had propagated into and preserved by certain fauna, and until now, propagated to human beings.



**AUTHORS:** ZHAO Wenbin [6392 2429 1755]  
LIU Qingwu [0491 1987 2976]  
CHEN Yaochao [7115 0068 2600]  
CHENG Yufeng [4453 3768 7685]

**ORG:** All of Lianyungang City Epidemic Control Station

**TITLE:** "Effect of Myelocineritis Sugar-coated Pills Living Vaccine Immunization Course"

**SOURCE:** Beijing ZHONGHUA YUFANG YIXUE ZAZHI [Chinese Journal of Preventive Medicine] Vol 13 No 1, 25 Feb 79 p 14

**ABSTRACT:** The authors report successful immunization of 146 infants, aged from 2 months to one year, against myelocineritis by three types of myelocineritis sugar-coated pills of living vaccines. After a complete course of immunization that took 10 months, it was confirmed by various tests that definite antibody levels were attained among 90% of the more susceptible and lower antibody infants. The myelocineritis sugar-coated living vaccine pills of types I, II and III, were developed by the Kunming Institute of Medical Biology, and manufactured by the 7th Shanghai Pharmaceutical Plant.

**AUTHOR:** None

**ORG:** Ophthalmology Teaching and Research Section, Beijing Medical College Third Hospital

**TITLE:** "Clinical Observation on Eye Injuries Caused by TNT Intoxication"

**SOURCE:** Beijing ZHONGHUA YUFANG YIXUE ZAZHI [Chinese Journal of Preventive Medicine] Vol 13 No 1, 25 Feb 79 pp 15-17

**ABSTRACT:** This article reports an investigation on eye injuries caused by TNT intoxication, and how to prevent them. While no appreciable injuries were observed in visual function, regulation function, eyelids, corneas, iris, front chambers and eye fundus, the vitreous body appears to be most susceptible to TNT intoxication as TNT cataract, which is directly related to working age, age, and the types of work involved. Following a summary of how the vitreous body may be intoxicated by TNT, some methods of identifying, diagnosing, treating and preventing TNT cataract are introduced. It is suggested that traditional Chinese medicine be studied and experimented for the treatment of TNT cataract.

AUTHOR: HAO Qinggong [6787 1987 0501]

ORG: Shandong Pingdu County Epidemic Control Station

TITLE: "Investigation on Hepatic Schistosomiasis Caused by Eating Unthoroughly Cooked Fresh Water Fishes and Clams"

SOURCE: Beijing ZHONGHUA YUFANG YIXUE ZAZHI [Chinese Journal of Preventive Medicine] Vol 13 No 1, 25 Feb 79 p 17

ABSTRACT: This article reports an investigation on a swampy area in Pingdu County of Shandong province infested with hepatic schistosomiasis, where water is heavily polluted with human excretions, and the more than 2,000 population has the habit of eating unthoroughly cooked fresh water fishes and clams. Laboratory tests show that 8.1% of 2,077 human feces samples contains an average of 400-500 schistoma eggs, with some as much as 10,600 eggs, 46.5% of the fishes and 20% of the clams contains schistoma coracidium, while 60% of dog feces and 50% of cat feces contains also schistoma eggs. The infection is highest among children of 11-15 years of age.

AUTHORS: FANG Tianqi [2455 1131 6386]  
PENG Daoyi [1756 6670 0308]  
TANG Guozhu [0781 0948 2691]

ORG: Institute of Parasitic Diseases, Hubei Provincial Academy of Medical Sciences

TITLE: "Studies on the Bionomics and Methods of Oncomelania Snails Eradication in the Reedy Regions of Hubei"

SOURCE: Beijing ZHONGHUA YUFANG YIXUE ZAZHI [Chinese Journal of Preventive Medicine] Vol 13 No 1, 25 Feb 79 pp 18-24

ABSTRACT: A study on the bionomics of Oncomelania snails over the reed plantation along the river and lake banks of Hubei province concludes that the distribution and density of the snails depend mainly upon the physical features and elevation of the fields, the duration of floods as well as weed distribution, soil quality, and the rate of water flows. Therefore, to eradicate the snails, in addition to applying such methods as burning the ground, mechanical ploughing, rolling and pressing of the soil, application of insecticides, and encirclement with low dikes, it is important to control the flood level below the dike encirclements, and modifying the physical features of the soil to fundamentally change the mitogenic environment of the snails.

AUTHOR: None

ORG: Xinjiang Tacheng District Epidemic Control Station

TITLE: "Investigation on A Case of Dog Liver Poisoning"

SOURCE: Beijing ZHONGHUA YUFANG YIXUE ZAZHI [Chinese Journal of Preventive Medicine] Vol 13 No 1, 25 Feb 79 p 24

ABSTRACT: This article reports the investigation of a case of acute dog liver poisoning, after a family of seven ate together a dish of cooked dog liver in the winter of 1973. The seriousness of the poisoning symptoms coincides with the quantity of dog liver eaten by each individual. Since an analysis of the left over dog liver by the antimony trichloride colorimetry finds that the vitamin A content in the dog liver is as high as 70,000 I.U., it is concluded that the poisoning is actually vitamin A vitaminosis.

AUTHOR: HUANG Xiaolan (7806 1420 5695)

ORG: Health Statistics Teaching and Research Section, Department of Hygiene, Zhongshan Medical College

TITLE: "Calculation and Application of the Standardized Mortality Ratio and Its Fiducial Limit"

SOURCE: Beijing ZHONGHUA YUFANG YIXUE ZAZHI [Chinese Journal of Preventive Medicine] Vol 13 No 1, 25 Feb 79 pp 25-28

ABSTRACT: The author introduces the principle and method of how to apply the standardized mortality ratio (S.M.R.) to determine the relations between certain occupational factors and workmen's health hazards, or the relations between certain human groups and certain diseases, as well as how the Poisson distribution may be applied to obtain directly the probability to ascertain its fiducial limit. In conclusion, it is pointed out and illustrated that the standardized mortality ratio must be selected with extreme caution, and that two similar standardized mortality ratio do not necessarily mean that the mortality rate of the two groups are the same.

AUTHORS: ZHANG Yusheng [1728 3768 3932]  
WANG Jinkui [3769 6855 7608]

ORG: Both of Zhejiang Yuhuan County People's Hospital

TITLE: "654-2 Used to Save Organic Phosphate Pesticide Intoxication"

SOURCE: Beijing ZHONGHUA YUFANG YIXUE ZAZHI [Chinese Journal of Preventive Medicine] Vol 13 No 1, 25 Feb 79 p 28

ABSTRACT: The authors report successful use of a "654-2" preparation in the treatment of 70 cases of organic phosphate pesticide intoxication of various degrees, when 94.3% were cured, and 5.7% died. The drug was administered by intravenous injection, which started with a strong dose, and then reduced gradually. A Jielinding (phosphate relief preparation) is also injected intravenously coordinately when the intoxication is more serious. The pharmacology and chemical structure of "654-2" is quite similar to atropine, but milder. Too low initial dose, or too fast reduction of the following doses may cause death.

AUTHOR: None

ORG: Shanghai Institute of Labor Hygiene and Occupational Diseases

TITLE: "Studies on the Maximum Allowable Concentration of N, N-Dimethyl-Acetamide"

SOURCE: Beijing ZHONGHUA YUFANG YIXUE ZAZHI [Chinese Journal of Preventive Medicine] Vol 13 No 1, 25 Feb 79 pp 29-31

ABSTRACT: This article reports a study on the maximum allowable concentration of DMA (N, N-dimethylacetamide) that includes: 1) acute toxicity on mice; 2) subacute toxicity on mice and rabbit; 3) accumulated toxicity on mice; and 4) slow inhalation on rabbit. In addition, the blood, urine and liver function of workmen exposed to different DMA concentration in the air of workshops are also observed. Based on the above results obtained, it is suggested that the maximum allowable DMA concentration in the air of workshops should be 10 milligrams/cubic meter instead of the 1967 U.S.A. AGGIH adopted workshop DMA threshold limit of 35 milligram/cubic meter.



AUTHORS: ZHAO Xiujin [6392 0208 3866]  
MA Xiho [7456 3556 0735]

ORG: None

TITLE: "Method and Effect of the Chlorination of Raw Water with Liquified Chlorine without the Use of Chlorinators"

SOURCE: Beijing ZHONGHUA YUFANG YIXUE ZAZHI [Chinese Journal of Preventive Medicine] Vol 13 No 1, 25 Feb 79 pp 32-33

ABSTRACT: The authors introduce the construction and performance of an equipment to chlorinate raw water directly with liquified chlorine without the use of the usual chlorinator. The amount of liquified chlorine to be released is controlled by a scaled valve. Developed by a certain Hygiene Department of the Chinese People's Liberation Army, it was originally intended to disinfect the water of low water consuming units, although it can also disinfect water of waterworks of well over millions tons capacity of water, provided the operational, managing and maintenance procedures are strictly followed.

AUTHORS: SHEN Guangyuan [3088 0342 0337]  
SHAO Yanqing [6730 16931987]

ORG: None

TITLE: "A Case of Fluoride Poisoning Caused by Prolonged Drinking of Hot Spring Water"

SOURCE: Beijing ZHONGHUA YUFANG YIXUE ZAZHI [Chinese Journal of Preventive Medicine] Vol 13 No 1, 25 Feb 79 p 33

ABSTRACT: The authors report the discovery of a case of fluoride osteopathy caused by prolonged drinking of hot spring water having a fluoride content of as high as 14 mg/l. A description is made on some characteristic symptoms observed from x-ray examinations, and how it is distinguished from the symptoms of osteopetrosis and rheumatoid myelitis. The treatment of the disease is not mentioned.



AUTHOR: None

ORG: Labor Hygiene and Occupational Disease Teaching and Research Laboratory of Wuhan Medical College, Zhuzhou Glass Industry Planning and Design Institute, Department of Civil Engineering of Hunan University, and Zhuzhou Glass Plant

TITLE: "Evaluation of Heat Resistant Clothings"

SOURCE: Beijing ZHONGHUA YUFANG YIXUE ZAZHI [Chinese Journal of Preventive Medicine] Vol 13 No 1, 25 Feb 79 pp 34-37

ABSTRACT: This article reports a comparative study on the thermal radiation transference, reflection and thermal transmission properties of a newly developed aluminum Teflon membrane coated heat resistant clothings against those of the currently used white canvas cotton heat resistant clothing, which confirms a definite superiority of the former. To cope with their poor ventilating and heat dissipating properties, a porous bamboo vest is further developed to be worn beneath the heat resistant clothing. The new aluminum Teflon membrane coated heat resistant clothing was developed by the Wuhan Institute of Metallurgical Safety Techniques and other correlated units.

AUTHOR: SHA Sen [3097 2773]

ORG: Labor Hygiene Department of Urumqi Railway Central Epidemic Control Station and Occupational Disease Clinic of Urumqi Railway Central Hospital

TITLE: "Three Cases of Painters' Lead Poisoning"

SOURCE: Beijing ZHONGHUA YUFANG YIXUE ZAZHI [Chinese Journal of Preventive Medicine] Vol 13 No 1, 25 Feb 79 p 37

ABSTRACT: This article reports the age, principal clinical symptoms, urine and feces purine tests, lead level in urine in terms of mg/l, electrocardiograms, and eye fundus examinations of three cases of lead poisoning, derived from painting or spraying paints onto railway carts, mostly in contact with  $PbCrO_4$  and  $Pb_3O_4$ . The symptoms of all three cases, particularly those at the retina, are similar to those reported by Sonkin in 1963, and replicated by Huss in 1964.

AUTHOR: ZHAO Shoujin [6392 1343 6930]

ORG: Chinese Communist Party Anqing District Committee Schistosomiasis Control Directing Office

TITLE: "Studies on the Prevention of Cercaria in Epidemic Water Irrigated Fields"

SOURCE: Beijing ZHONGHUA YUFANG YIXUE ZAZHI [Chinese Journal of Preventive Medicine] Vol 13 No 1, 25 Feb 79 pp 38-40

ABSTRACT: To ascertain the effect of stirring or agitating irrigating epidemic water on the life and infection of cercaria, the author reports a series of experiments that confirms its prevention of cercaria, when irrigating epidemic water were allowed to pass through water pumps, culverts and manual water peddling machine. It is pointed out that, despite its definite killing effect on the cercaria of *Schistosoma japonicum*, their possible adherence to hosts in the water, and the volume and velocity of water flows are also factors to be considered.

Thanks are expressed to Hu Shaolun [5170 4801 0243], Xie Xunren [6200 8133 0088] and Gu Tingyan [7357 1694 1750], all of Anqing Blood Diseases Control Clinic, for assistance.

AUTHOR: SUN Ruixing [1327 3843 5281]

ORG: Wuxi City Epidemic Control Station and Wuxi City Suburban Yangming Commune Health Clinic

TITLE: "Study on the Methods of Disinfecting Well Water"

SOURCE: Beijing ZHONGHUA YUFANG YIXUE ZAZHI [Chinese Journal of Preventive Medicine] Vol 13 No 1, 25 Feb 79 p 40

ABSTRACT: The author introduces the construction and performance of a crude bleaching powder dispenser, which is able to dispense bleaching powder automatically in coincidence with the agitation of drawing well water. The bleaching powder is packed in a perforated canister, which is wrapped in nylon net bag, and tied at both ends to bamboo buoys to keep it afloat. The dispenser can maintain the disinfection for 10-15 days. For larger wells, two dispensers may be used. The amount of bleaching powder so dispensed is calculated by its concentration at the 2 meters depth below the water surface.

AUTHOR: OU YANG Qiyun [2962/7122 6386 6663]

ORG: Anshan City Silicosis Diagnosis Group, Haicheng County Epidemic Control Station, and Talc Mine Staff Hospital

TITLE: "Survey of the Health of Workers Exposed to Talc Dust"

SOURCE: Beijing ZHONGHUA YUFANG YIXUE ZAZHI [Chinese Journal of Preventive Medicine] Vol 13 No 1, 25 Feb 79 pp 41-43

ABSTRACT: The survey on the health of 1,851 workers exposed to talc dust at a certain talc mine in Anshan city from 1958 to 1975 concludes that: because the surrounding rocks are mainly globertite void of tremotite, the level of talc dust in the air is low, and therefore the incidence of talc lung self-conscious diseases are considerably light, although the ventilation functions of lungs have been slightly depressed. An analysis is also made on the x-ray characteristics of that of singular talc silicosis at various degrees that may be adopted as a basis for silicosis diagnosis.

AUTHORS: XIE Zhousheng [6200 0719 3932]  
PAN Maoqi [3382 2021 2710]

ORG: Both of Guangxi Guilin Medical School Hospital

TITLE: "A Case of Erroneously Diagnosed Subacute Lead Poisoning"

SOURCE: Beijing ZHONGHUA YUFANG YIXUE ZAZHI [Chinese Journal of Preventive Medicine] Vol 13 No 1, 25 Feb 79 p 43

ABSTRACT: The authors report the treatment of a case that was previously erroneously diagnosed and treated as stomach ache. After it was found that the lead level in the urine is as high as 0.18 mg/l, it was diagnosed as subacute lead poisoning, and satisfactorily treated with lead antidotes.

AUTHORS: WANG Youzhi [3769 6788 0037]  
WEI Shufeng [7614 2579 7685]

ORG: Medical Zoology and Entomology Research Group, Sichuan Provincial  
Epidemic Control Station

TITLE: "Investigation on Mites Pollution of Brown Sugar"

SOURCE: Beijing ZHONGHUA YUFANG YIXUE ZAZHI [Chinese Journal of Preventive Medicine] Vol 13 No 1, 25 Feb 79 pp 44-46

ABSTRACT: An investigation on mite pollution over brown sugar in Sichuan province from December of 1971 to December of 1972 concludes that: 1) 10 species belonging to three classes are identified from a density of 209 mites in 250 grams of brown sugar by average, which can be as high as 2,110 mites; 2) the source of the mite pollution is possibly due to lack of or unthorough disinfection of the warehouses; 3) a new species lately discovered may be originated from some imported Cuban sugar; and 4) mite polluted brown sugar changes the surface of brown sugar, and may cause such diseases as dermatitis, conjunctivitis, enteritis, bronchial asthma, etc.  
Mite identification was assisted by Wang Xiaozhu [3769 1321 4371] of the Institute of Zoology of the Chinese Academy of Sciences.

AUTHOR: None

ORG: This Journal

TITLE: "National Disinfection Conference Convened at Shanghai"

SOURCE: Beijing ZHONGHUA YUFANG YIXUE ZAZHI [Chinese Journal of Preventive Medicine] Vol 13 No 1, 25 Feb 79 p 46

ABSTRACT: This article reports the convening of the first National Disinfection Conference at Shanghai on 16-25 November 1978, and attended by more than 90 representatives from various related units throughout China. In addition to exchange of experiences and reports on advances in disinfection within the nation and abroad, recent research on such new disinfectants and their applications as ethylene oxide, acetic peroxide, sodium dichloroisocyanate, "Yushuiqing", and pentadialdehyde as well as ferric acid are introduced. A discussion is finally made on how to further strengthen the disinfection work in China.



AUTHOR: YUAN Chouen [5913 0719 1869]

ORG: Bacteriology Research Laboratory, Anshan City Epidemic Control Station

TITLE: "Experiment on the Examination of Shigella Phage from Wells in Epidemic Areas"

SOURCE: Beijing ZHONGHUA YUFANG YIXUE ZAZHI [Chinese Journal of Preventive Medicine] Vol 13 No 1, 25 Feb 79 pp 47-48

ABSTRACT: Shigella phage is adopted to trace and study the infection, distribution and characteristics of Shigella from 14 wells and two ponds along the Anshan city suburbs, because of its strong specificity, simpler handling, and higher obtainment. It is found that both the well and pond water are in varying degree contaminated with the bacillus, which is higher in the dysentery infected area, and dominated by Shigella. Cross reaction is found to occur between type I and II of Shigella of Flexner, but not between Shigella sonne, Bacillus typhi and Shigella of Flexner. The adoption of bacteriophage to trace infection is recommended.

AUTHOR: None

ORG: Labor Hygiene Research Laboratory, Institute of Hygiene, Chinese Academy of Sciences

TITLE: "Application of Electrophoresis to Determine Lysozyme in Serum"

SOURCE: Beijing ZHONGHUA YUFANG YIXUE ZAZHI [Chinese Journal of Preventive Medicine] Vol 13 No 1, 25 Feb 79 pp 49-50

ABSTRACT: This article reports a modification of the Virella technique in the use of electrophoresis to determine the lysozyme level in serum as an auxiliary diagnosis of silicosis. Further to the bacteria-containing agar-agar diffusion technique, the modification involves comparing the electrophoretic determination of lysozyme level in serum of silicosis patients against those of normal persons. The average values of 27 normal persons and 43 silicosis patients obtained are  $8.3 \pm 0.61$  for the former, vs  $14.4 \pm 0.81$  (microgram/milliliter) for the latter. The results check those obtained by photo-electric turbidimetry.



AUTHOR: AI Younian [5337 2589 1628]

ORG: Tangshan City Epidemic Control Station

TITLE: "Improvement on the Determination of Trace Cyanides in Water"

SOURCE: Beijing ZHONGHUA YUFANG YIXUE ZAZHI [Chinese Journal of Preventive Medicine] Vol 13 No 1, 25 Feb 79 pp 51-52

ABSTRACT: The author reports improvement on the conventional isonicotinic acid and pyrazone method for the determination of cyanides in water. The modification includes the use of 0.5M phosphate buffer (pH 6.6) to enable the use of an alkaline as the absorption liquid without neutralization during the distillation process, and a new method of preparing the coloring agent that improves its sensitivity, and enables the colorimetry to be conducted at the pH 6.6 range, and the temperature range of 15-40°C. If chloro-amine T is added, the optimal temperature range is 15-25°C. The relative variation coefficient of this method is 1.37%, and the average recovery is 99%.

AUTHOR: None

ORG: Nanjing City Epidemic Control Station

TITLE: "Nanjing District 1977 Shigella Types Distribution"

SOURCE: Beijing ZHONGHUA YUFANG YIXUE ZAZHI [Chinese Journal of Preventive Medicine] Vol 13 No 1, 25 Feb 79 p 52

ABSTRACT: Of the 160 Shigella strains isolated from clinical patients and healthy persons along the Nanjing area in 1977, 0.6% belongs to A subgroup (Shigella), 85% belongs to B subgroup (Shigella of Flexna), and 13.1% belongs to D subgroup (Shigella sonnei), while 1.3% is not determined. Of the 85% Shigella of Flexna, 5.1% belongs to type 1a, 7.3% belongs to type 1b, 61.8% belongs to type 2a, 2.9% belongs to type 2b, 18.6% belongs to type 3, 2.9% belongs to type 4, 0.7% belongs to type 5, and 0.7% belongs to type 6. It is to be noted that the most toxic Shigella dysenteriae is only 0.6%.

AUTHOR: OUYANG An [2962/7122 1344]

ORG: Endocrinology Research Section, Department of Internal Medicine,  
Honan Medical College First Hospital

TITLE: "Iodized Oil in the Control of Endemic Goiter"

SOURCE: Beijing ZHONGHUA YUFANG YIXUE ZAZHI [Chinese Journal of Preventive Medicine] Vol 13 No 1, 25 Feb 79 pp 53-59

ABSTRACT: Following a review on the widespread incidences of endemic goiter throughout the world, the author introduces the general knowledge concerned with the current use of iodized oil in the prevention and treatment of the disease that includes: 1) types of iodized oil; 2) dose and methods of iodized oil injection; 3) results of controlling goiter with iodized oil; 4) changes of goiter histology and organic functions due to iodized oil injection; 5) possible mechanism of prolonged intramuscular injection of iodized oil; and 6) side reaction of iodized oil injection. It is reported that the iodized oil produced by Shanghai Huaihai Pharmaceutical Plant is iodized walnut oil that contains 38.2% iodine by weight, or 507.3 mg iodine per milliliter.

AUTHOR: LIU Jingyu [0491 6978 8938]

ORG: Department of Occupational Diseases, Beijing Medical College Third Hospital

TITLE: "Immunological Problems of Occupational Diseases"

SOURCE: Beijing ZHONGHUA YUFANG YIXUE ZAZHI [Chinese Journal of Preventive Medicine] Vol 13 No 1, 25 Feb 79 pp 60-64

ABSTRACT: The author reviews recent advances and existing problems in the immunology of such occupational diseases as: 1) occupational asthma that includes allergic asthma and extrinsic allergic alveolitis; 2) metals poisoning that involves such metals as beryllium, nickel, chromium, gold and mercury; 3) allergy to benzenoids and drugs; and 4) silicosis.

**END OF**

**FICHE**

**DATE FILMED**

31 AUG 79

---

WB